APPLICATION FOR POWER GENERATION

····- 1

• •

, ۲

LICENSE

Star Textile Mills Limited



Dated: 13 April, 2017 Ref: STL/P/417

THE REGISTRAR, NATIONAL ELECTRIC POWER REGULATORY AUTHORITY NEPRA TOWER ATATURK AVENUE (EAST), SECTOR G-5/1 ISLAMABAD

APPLICATION FOR A POWER GENERATION LICENSE/DESCOS 3.022 MW IN PURSUANCE OF NOTIFICATION (SRO 5498 DATED 13-06-2016) REGARDING NEPRA (WHEELING OF ELECTRIC POWER REGULATION ACT 2016

RESPECTED SIR,

I, Mohammad Hanif Director and Company Secretary duly authorized representative of STAR TEXTILE MILLS LIMITED by virtue of Board Resolution dated 25-02-2017 hereby apply to National Electric Power Regulatory Authority for the grant of a Generation LICENSE/DESCO's at STAR TEXTILE MILLS LIMITED, under section 15 of the regulation of generation, transmission and distribution of electric power act 1997 and in pursuance of SRO 549 dated 13-06-2016 regarding NEPRA (WHEELING OF ELECTRIC POWER REGULATION ACT 2016.We, further seeks second tiers supply authorization under above referred notification to engage in second tier supply business to supply electricity to its associated companies namely : EXIMPO COOL CHAINS (PVT.) LIMITED A-41-S Fakhruddin Valika Road, S.I.T.E, Karachi (BPC).

I, certify that the documents in support attached with this application are prepared and submitted in conformity with the provisions of the NATIONAL ELECTRIC POWER REGULATORY AUTHORITY LICENSING (Application and Modification Procedure) Regulations, 1999 and undertake to abide by the terms and provisions of the above said regulations. I, Further undertake and confirm that the information provided in the attached supporting documents is true and correct to the best of my knowledge and belief.

Pay order amounting to Rs. 148,800 (Fee Including Indexation) is attached along with all required documents.



Mohammad Hanif Director and Company Secretary



Certified true copy of the Resolution passed by the Board of Directors of STAR TEXTILE MILLS Limited in a meeting held on 25th February 2017.

"A meeting of the Board Directors of STAR TEXTILE MILLS Limited held on 25th February 2017 at its office Located at A-41 Fakherudin Valika Road S.I.T.E Karachi. The agenda of meeting is to discuss the application for electricity generation & distribution (Disco) License from NEPRA.

Resolved (i)that excess electricity, according to Notification (SRO 549 dated 13-6-2016) sale to allied Company situated in same premises namely EXIMPO COOL CHAIN (Pvt.) Ltd A-41S Fakherudin Valika Road S.I.T.E. Karachi as "Bulk Power Consumer" to take benefit from aforesaid Notification, which for company will apply for Generation & Distribution /Disco license from NEPRA.

Resolved further (ii)that Mian Muhammad Zahid Advocate Sindh Bar Council, on behalf of STAR Textile Mills Limited, is engaged and authorized to get prepare and submit the necessary documents, appear before NEPRA as needed, provide any information required by NEPRA authorities in respect of the project, and do all acts things necessary for the proceeding, processing completion and finalization of the aforementioned application for electricity generation & distribution & (Disco) License from NEPRA. To provide electricity to "BPC" mentioned above. The ESP Petrosaz (Pvt.) Limited will assist as consultant.

Resolved further (iii)that Company Secretary is singly authorized to sign any document, pay the necessary filling fees, pay the necessary license fee or any fee required under the law.

Resolved further(iv) that the company Secretary may sign and issue true certified copies of this Resolution as and when required."



Certificate of incorporation

19 tar Textile Mills Limited Seal of Registra of Joint Steck Companies Certificate of Incorporation. No. SIND. 1020 of 1952 - 1953 I hereby certify that Star Jextile Mills Limited, is this day incorporated under the Companies Act. V I S of 1913, as applicable to Takistan and that the Company eres Limited. Given under my hand at Karachi twentysixth day of May, One this thousand nine hundred and fifty two. Seal of Registrat of Joint Stock Sall S. M. Chagle Companies Registrar of Joint Stock Companies for Sind, Karachi HEIGHTER REPERTIES AND DEPENDENT FOR THE PRODUCED AND THE

Memorandum and Article of Association

THE COMPANIES ORDINANCE, 1984

Company Limited By Shares

MEMORANDUM OF ASSOCIATION

OF



The objects for which the Company is established are:

- (a) To carryon the business of spinners, weavers, manufactures, ginner, pressers, packers and balers of cotton, jute, hemp, silk, artificial silk, wool and any other fibrous materials, and the cultivation. Thereof and the business of weaving or otherwise manufacturing. bleaching. printing and selling yarn, cloth. linen and other goods and fabrics whether textile, frebled, nettled or looped and of buying, selling and dealing in cotton and other fibrous materials, yarn, cloth, linen and other goods or merchandise made thereof, and generally to carryon the business of cotton spinners and doublers, linen manufacturers, cotton, flex, hemp, jute, silk, artificial silk, wool yarn and cloth merchants, bleachers and dyers, makers of vitriol bleaching and dyeing materials and to transact all manufacturing of curing and preparing process, and mercantile business that may be necessary or expedient and to purchase and vend raw material and manufactured articles.
- (b) To carryon all or any of the businesses of producers and/or manufacturers, importers, exporters, wholesale and retail dealers of an in textile fabrics of all kinds, leather goods, household and other furniture, turney, ironmongery, hardware, cutlery, crockery and household fittings and utensils, ornaments, jewellery, plated goods, stationery and fancy goods, drugs, chemicals, perfumery, soap, apparatus, implements and things for use in sports and games, articles required

for recreation and amusement, canvas, calico and oilskins, twines, ropes, nets, Hessians and materials of such like nature, rubber articles and goods, cardboard boxes and cartons, typewriters, calculation machines and other office appliances, carbon and duplication papers, cameras and photographic instruments and materials of all kinds, pictures and engravings, lenses, Mirrors, telescopes, refrigerators, radio apparatus and accessories, gramophones, gramophones records, motor cars and vehicles, motor cycles, bicycles and carriages of all kinds, motor accessories of all kinds, electric batteries, agricultural machines, Railway, tramway, electric, magnetic, galvanic and other apparatus, building materials of all kinds, granolithic, asphalt, cement, concrete, damp course, tar, pitch, resin, crushed stone, plaster, plaster of Paris, vulcanite, whiting of all kinds, grease, oils, paints, lead and disinfectants, tea, coffee, jams, preserve, sweets, cereal and other foods, raw

materials generally, articles and commodities of personal and household use and consumptions, silk mercers, cloth manufacturers, shirt and clothing manufacturers, furrier 'haberdashers, hosiers, milliner, dressmakers, tailors, hatters, clothiers, outfitters, glovers, lace manufacturers, feather dressers, boot and shoe markers, leather tanners and curriers, hairdressers, and toilet requisite specialists, chemists, tobacconists, hotels and restaurant keepers, proprietors of boarding houses and flats, licensee victuallers and spirit merchants, bakers, confectioners. Mineral water manufacturers, café proprietors, fruiterers, manufacturers, of ice-cream, dairymen, butchers and purveyors, curers, owners of creameries abattoirs and cold storage houses, canners and packers, and preservers, fishmongers, dry 'cleaners and launderers, Manchester and general warehousemen, furniture removers and stores, upholsterers house decorators and painters, builders and contractors, masons, bricklayers, plasterers, carpenters, plumbers and sanitary engineers, gas fitters electrical engineers, timber merchants, brick and tile makers, quarry masters and owners, constructional engineers, iron, steel, metal, wood and stone merchants, manufacturers and fabricators, civil and general engineers, smiths, millwrights, coach and carriage builders, saddlers, motor garage owners and motor bus proprietors, mechanical engineers, suppliers of wood, coal, coke, gas, electrically, cabinet makers, millers, monumental masons and sculptors, proprietors and publishers of newspapers, journals, diaries, magazines, book and other literary works and undertakings, printers, typefouders, lithographers, engravers stereotypers, electrotypers, photographers, printers, die sinkers, book-binders, book sellers, seal makers, paper and paper bag makers, advertising contractors, cinema proprietors, showmen and caterers for amusement generally, photographers, picture frames and importers, nurserymen and florists, ice merchants, oil and color men. sheep farmers, stock owner and breeders, pastures, graziers, livestock dealers, livestock salesmen, freight contractors, labor contractor, stevedores, carriers, transporters or conveyors of passengers, mail, parcels and goods whether by air, rail or road, auctioneers, land, house and estate agents, shipping and mercantile agents, passenger agents, landing and forwarding agents, customs agents, indent agents, insurance agents, market agents, general and commission agents, trustees, manufacturer's representatives, brokers, financiers, invertors, speculators, in any or all the branches or departments of such businesses.

1

4

- (c) To connect the business of General Dealer on all its branches, to carry on business as shippers, business, general merchants, importers, exporters, dealers, contractors, singertine tad commission' agents, representatives of or agents for manufacturers, merchanter of porters, fancy importers and the like, and in general to import, export, manufactures, purchase, sell, exchange, barter or otherwise dispose of or trade in all goods, estate, produce, articles, merchandise, commodities and wares
- (d) To carryon any other business whether commercial, manufacturing or otherwise which may be conveniently carried on in connection with the objects of the Company or calculated directly or indirectly to enhance the value of or renders profitable any of the Company's property or rights.
- (e) To buy, sell, manufacture, repair, alter and exchange, let on hire, export and deal in all kinds of articles and thing which may be required for the purpose of the said businesses or commonly supplied or dealt in by persons engaged in any such

Businesses or which may seem capable of being profitable dealt with in connection with the said businesses.

- (f) To enter into partnership or into any arrangement for sharing profits, union of interests, co-operation, joint adventures, or otherwise with any person or company carrying on or engaged in or about to carryon or engage in any business or transaction which this company is authorized to carryon or engage in, or any business or transaction capable of being conducted so as directly or indirectly to benefit this company.
- (g) To acquire and undertake the whole or any part of the business, property and liabilities of any person or company carrying on any business which this Company is authorized to carryon, or possessed of property suitable fro the purposes of thi Company and as the consideration to pay cash or to issue any shares or obligations of this company for the same.
- (h) To subscribe for , take, purchase or otherwise acquire and hold shares in any other Company having objects altogether or in part similar to those of this Company or carrying on any business capable of being conducted so as directly or indirectly to benefit this Company.
- (i) To amalgamate with any company having its objects altogether or in part similar to those of this company.
- (j) To borrow, raise or secure the payment of money in such manner as the Company shall think fit, and in particular by the issue of debentures charged upon or secured by a conveyance to trustees or otherwise of all or any part of the company's undertaking and property both present and future, including its uncalled capital, and by passing bonds for registration with the proper authority.
- (k) To apply for, purchase or otherwise acquire any agencies, contracts, trademarks, patents, licenses, concessions and like and any rights or privileges which the Company may think necessary or convenient for the purposes of its business, or capable of being profitably dealt with in connection with any of its property or rights for the time being and to use, exercise, develop, or grant licenses in respect of or otherwise turn to account the property, rights or information so acquired.
- (I) To open banking accounts, to draw, make, accepts, endorse, discount, execute and issue Promissory Notes, Bill of Exchange, cheaques, Bills of Lading, debentures and other negotiable instrument other than share warrants to bearer.
- (m) To sell or otherwise dispose of the undertaking of the Company or any part thereof for such consideration as the Company may think fit, and in particulation for such company debentures, or securities of any other Company having objects also gether of other part similar to those of this Company.
- (n) To purchase, take on lease or in exchange, hire or otherwise personal property, and any rights or privileges which the c necessary or convenient for the purposes of its business and in buildings, machinery and plant,

(o) To erect, construct, lay down, enlarge, and maintain any buildings, work, machinery and plant necessary or convenient for the Company's business.

ě.

11

a da an

- Law

8.3

- (p) To sell, improve, manage, develop, exchange, lease, mortgage, dispose of, turn to account, or otherwise deal with all or any part of the property and rights of the Company.
- (q) To invest and deal with the moneys of the Company not, immediately required upon such securities and in such manners as may from time to time be determined.
- (r) To lend money to persons or companies and on such terms as may seem expedient and in particular to customers and other having dealings with the company.
- (s) To guarantee the due and proper performance and carrying out by any person, firm, company, organization or institution of contracts, undertakings and obligations' of all kinds, and to issue the necessary acts of surety ships, guarantee or indemnity in connection therewith.
- (t) To enterinto any arrangement with any Government of authority, supreme municipal, local or otherwise, and to obtain from any such Government or authority any rights, concessions and privileges that may seem conducive to the Company's objects or any of them, and to carry out, exercise, and comply with any such arrangements, rights, privileges and concessions.
- (u) To promote any company or companies for the purpose of acquiring all or any of the property or liabilities of this. Company and for any other purpose which may seem directly or indirectly calculated to benefit this Company.
- (v) To establish and support or to aid in the establishment and support of associations, institutions, or conveniences, calculated to benefit employees or ex-employees of the Company or its predecessors in business, or the dependents or connections of such persons, and to grant pensions and allowances and to make payments toward insurance, and to subscribe or guarantee money for charitable or benevolent objects or for any exhibitions, or for any public, general or useful objects.
- (w) To pay all expenses of and incidental to the registration and promotion of the company and to remunerate any person or company for services rendered in placing or assisting to place any of the shares in the Company's Capital or any debentures or other securities of the Company, or in or about the promotion of the Company or the conduct of its business.

To undertake and execute any Trusts, the undertaking whereof may seem desirable and either gratuitously or otherwise, and to act as Managers, Directors or Managing Again, of any other person or persons or company or companies.

appoint Managing Agents, Agents and Managers and constitute Agencies of Company in Pakistan and/or elsewhere or in any other companies and at the discontinue such Agencies.

4

Company Registration

* Securities

- (z) To distribute any of the assets for the time being of the Company amongst the members in kind and to stipulate for and obtain for the members, any property, rights, privileges or options.
- (aa) To do all or any of the above things in any part of the world, and as principals, agents, contractors, trustees, or otherwise and by or through trustees, agents or otherwise, and either alone or in conjunction with others.
- (bb) To do all such other things as are incidental or may seem to the Company to be conducive to the attainment of the above objects or in connection with any of the objects of the company.
- (cc) To do Generation, Transmission and Distribution of Electric Power under NEPRA Regulation and with Notification (SRO 459 (1)2016 dated 13-06-2016 regarding National Electric Power Regulatory Authority (Wheeling of Electric Power) Regulations, 2016.
- (dd) To do LPG Handling, import, Marketing Business, Manufacturing of LPG equipments etc under OGRA License / regulations.
- (ee) To manufacture, sell, import and export all kinds of Plastic products.
- 4. The liability of the Member is limited.
- 5. The Capital of the Company is Rs. 30,000,000/- (Rupees Thirty million) divided into 3,000,000 shares of Rs. 10/- each.

The Company has power to increase or reduce the Capital, to consolidate the shares, to abrogate any rights attaching to such shares, and also to divide the shares in the original or any increased capital into several classes and from time to time to alter or modify the same in; such manner as may from time to time be provided by the regulations of the Company.



We, the several persons whose names, and addresses and occupations are subscribed below, are desirous of being formed into a Company in pusuance of this Memorandum of Association and we respectively agree to take the number of shares in the Capital of the Company set opposite our respective names.

Com Kingdas Cabo	No. of shares taken by each subscriber	Name Address and Occupation of Witness
MOLEMMAL COLE DADABHOY Opporte Sind Harresah, Farer Lind, Karachi	One	
MERCHANT		
USMAN ESOOF VAID Opposite Sind Madressah,	One	C.E.N SURRIED Advocate,
Farer Roard, Karachi		Finlay House, Mcleod Road Karachi
MERCHANT		

Dated at Karachi this 16th day of May 1952.

Certified to be True Copy Deputy Registrar of Companies

THE COMPANIES ORDINANCE, 1984

Company Limited By Shares

ARTICLES OF ASSOCIATION

قtar Textile Mills Limited Karachi.

PRELIMINARY

- 1. The regulations contained in Table "A" in the First Schedule to the Companies Ordinance (XLVII), 1984 shall not apply to the Company except in so far no to ap as they are repeated or contained in these Articles.
- 2. The chapter headings shall not effect the construction hereof and in these Articles, in appet unless there is something in the subject or extent inconsistent therewith :-
 - (a) The 'Ordinance' means the Companies Ordinance (XLVII) 1984 as amended and re-enacted, from time to time, and in force for the time being.
 - (b) 'The Articles' means these Articles of Association as originally framed or as altered, from time to time, by Special Resolution.
 - (c) 'Special Resolution' has the meaning assigned thereto by Section 2(36) of the Ordinance.
 - (d) 'The Board' shall mean the Directors from time to time, of the Company, acting at a meeting or through a Committee of Directors or by means of a Circular Resolution.
 - (e) 'The Company' means STAR TEXTILE MILLS LIMITED.
 - (f) 'The Company Office' means the Registered Office of the Company.
 - (g) 'The Directors' mean the Directors of the Company appointed from time to time, pursuant to these Articles; including alternate Directors.
 - (h) 'The Chairman' means the Chairman of the Board, appointed from time to, time, pursuant to these Articles.
 - (i) The Managing Director/Chief Executive means th the Company, appointed pursuant to Sections 198 a and any amendments thereof.



() 'The Secretary' means the Secretary of the Company for the time being, and the expression "Secretary" shall include a temporary or assistant Secretary and any person appointed by the Directors to perform any of the duties of the Secretary.

51

- (k) 'The Registrar' means the Registrar of Joint Stock Companies, Karachi.
- (1) 'Member' means a member of the Company within the meaning of Section 2(21) of the Ordinance.
- (m) 'The Memorandum' means the Memorandum of Association of the Company, as originally framed or as altered from time to time, in accordance with provisions of the Ordinance.
- (n) 'Sections' means Sections of the Ordinance.
- (o) 'Dividend' means the distribution of profits of the Company to its members and it includes Bonus.
- (p) 'The Seal' in relation to the Company means the Common Seal of The Company.
- (q) 'Person' means any person or corporation.
- (r) 'Proxy' means a proxy appointed under these Articles or an Attorney duly constituted under Power of Attorney.
- (s) 'Paid-up' includes credited as paid-up.

3

4

5

(t) 'In Writing' and 'Written' include printing, lithography, Photo stating and other means of representing or reproducing words in a visible form.

Unless the context otherwise requires, words or expressions contained in these regulations shall have the same meaning as in the Ordinance; and words importing in singular shall include the plural and vice versa and words importing the persons shall include bodies Corporate.

CAPITAL

The Authorised Capital of the Company is Rs. 30,000,000/- (Rupees thirty million) divided into 3,000,000 Ordinary Shares of Rs. 10/- (Rupees Ten) each.

BUSINESS

Any branch or kind of business which the Company is either expressly or by implication authorised to undertake may be undertaken by the Board to such total of partial abeyance whether such branch or kind of business may be the beautiest of partial abeyance whether such branch or kind of business may be be total of partial abeyance or not, so long as the Board may deemit expedient of the bard bard of proceed with the same.

SHARES

Section of Expanse Con the funds of the Company shall be employed in the purchase bans upon the security of the Company's shares. The Company shall not, except as authorised by Section 95 of the Ordinance give any financial assistance for the purpose of or in connection with any purchase of shares in the Company.

ANINDED BY SPECIAL RESULUTION AT THE ANNUAL GENERAL NEETING OF THE CONTANY HELD ON 16-07-BR. THE ANTIWHISED CAPITAL OF THE LUMPANY IS INCREASED TO RS.40,000,000/- (RUPEES FURLY NILLION) DIVIDED INTO 4,000,000 SHARES OF RS.10/- EACH.

INKTHER ANENDED BY SPECIAL RESULTION AT THE ETTRA-URDINARY GENERAL MEETING OF THE CHMPANY HELD IN 03-07 92. THE ADDINURISED CAPITAL OF THE LOMPANY IS INCREASED TO RE. 40,000,000/- (RUPEES SITTY MILLION) DIVIDED INTO 6,000,000 SHARES OF RE. 10/- EACH.

Without prejudice to any special rights previously conferred on the holders of any shares or class of shares already issued (which special rights shall not te varied provided by the next following Articles) any unissued shares and any new shares in the Company hereafter created may be issued with such special rights or such restrictions, whether in regard to dividend, return of capital voting or otherwise, as the Company in General Meeting or the Directors may from time to time determine in accordance with the Ordinance. Upon the issue of any shares the Directors shall comply with the provisions of Section 86 of the Ordinance unless they shall have obtained the decision of the Company in General Meeting to the issue of such shares on other terms.

7. All shares shall be fully paid shares.

6.

8.

9.

- No shares shall be offered to the public for subscription except upon the Shars to term that the amount payable on application shall be the full amount of the De Shars nominal amount of the share.
 - The Directors shall, as regards any allotment of shares, duly comply with such of the provisions of Sections 67 to 73 as may be applicable thereto.
- 10. Every person whose name is entered as member in the Register of Members Certicate shall, without payment, be entitled to receive, within ninety days after allotment to this issu or within forty-five days of the application for registration of transfer, a Certificate under the Seal sepcifying the share or shares held by him and the amount paid up thereon.
- 11. Provided that, in respect of a share or shares held jointly by several persons, the Company shall not be bound to issue more than one Certificate, and delivery of a Certificate for a share to one of several joint holders shall be sufficient delivery to all.
- 12. If a share certificate is defaced, lost or destroyed, it may be renewed on Ne payment of such fee; if any, not exceeding one rupee, and on such terms, ca if any, as to evidence and indemnity and payment of expenses incurred by the of Company in investigating title as the Directors think fit.
- 13. If and whenever as a result of an issue of new shares or any consolidation or sub-division of shares any member becomes entitled to hold shares in fraction, the Board shall not be required to issue such fractional shares and shall be entitled to sell whole shares at a reasonable price and pay and distribute amongst the members entitled to such fractional shares in due proportion the net proceeds of the sale thereof. For the purpose of giving effect to any such sale the Borad may authorise any person to transfer the shares sold to the purchaser thereof, and the purchaser shall be registered as the holder of the shares comprised in such transfer but he shall not be entitled to see the application of the purchase money nor shall his title to the shares be affected by any irregularity or invalidity in the proceedings in reference to the sale.

TRANSFER AND TRANSMISSION OF SHARES

- 14. The instrument of transfer of any share in the Companboth by the transferor and transferee, and the transferor sa remain holder of the share until the name of the transferee Register of Members in respect thereof.
- 15. Shares in the Company shall be transferred in the following former in any usual or common form which the Directors shall approve :-

cat in pl of he lo: des oyed def bed.

hall

Œб

Cert

sfer/

smise

Τr

Τr

3

	I of				
	in consideration of the sum of Rs				
	paid to me by of				
	paid to me by				
	the share (or shares) numbered	to			
	inclusive, in the	limited,			
	to hold unto the said transferee, h	limited, is executors, administrators, and assigns,			
	subject to the several conditions on which I held the same at the time				
	of the executions hereof, and l, the said transferee, do hereby agree to take the said share (or shares) subject to the conditions aforesaid.				
	take the said share (or shares) subj	ect to the conditions aforesaid.			
	As witness our hands this	day of			
Witne	222				
Signa	iture	Signature			
Jate	d	Transferor			
Jale	d	Transferor			
Witne	ess	Signature			
		Transferee			
Signa	iture	Full Name, Father's Name/			
		Husband's Name,			
run	Address				
		Nationality			
		Occupation and			
		Full Address of			
		Transferee			

No transfer shall be made to a minor or person of unsound mind.

The Directors shall not refuse to transfer any fully paid shares unless the transfer deed is defective or invalid. The Directors may also suspend the registration of transfers during the <u>ten</u> days immediately preceding a general meeting or prior to the determination of entitlement or rights of the shareholders by giving <u>seven</u> days' previous notice in the manner provided in the Ordinance. The Directors may decline to recognise any instrument of transfer unless :-

office a a fee not exceeding three rupees is paid to the Company in respect thereof; and

the stamped instrument of transfer is accompanied by the Certifithe of the Shares to which it relates, and such other evidence as the prectors may reasonably require to show the right of the transfer of the transfer.

tansfa allin be fusec hreas: tably. Securities the Directors refuse to register a transfer of shares, they shall within one month after the date on which the transfer deed was lodged with the Company send to the transferee and the transferor notice of the refusal indicating the defect or invalidity to the transferee, who shall, after removal of such defect or invalidity be entitled to re-lodge the transfer deed with the Company.

4

ŗ

scretion Dire cors

ansfe

acce ting

16.

Registred a

A Aueduno ,

17.

TRANSMISSION OF SHARES

- 18. The executors, administrators, heirs, or nominees, as the case may be, of a deceased share holder of a share shall be the only persons recognised by the Company as having any title to the share. In the case of a share registered in the names of two or more holders, the survivors or survivor, or the executors or administrators of the deceased survivor, shall be the only persons recognised by the Company as having any title to the share.
- 19. Any person becoming entitled to a share in consequence of the death, bankruptcy or insolvency of a member shall, upon such evidence being produced as may from time to time be required by the Directors, have the right, either to be registered as a member is respect of the share/shares or instead of being registered himself, to make such transfer of the share as the deceased or insolvent perosn could have made; but the Directors shall, in either case, have the same right to decline or suspend registration as they would have had in the case of a transferor of the share by the deceased or insolvent person before the death or insolvency.
- 20. A person becoming entitled to a share by reason of the death or insolvency of the holder shall be entitled to the same dividends and other advantages to which he would be entitled if he were the registered holder of the share, except that he shall not, before being registered as a member in respect of the share, be entitled in respect of the exercise any right conferred by membership in relation to meetings of the Company.

ALTERATION OF CAPITAL

- 21. The Company may from time to time, by Ordianary Resolution increase Alter n the Share Capital by such sum, to be divided into shares of such amount, as the pf Ca al. Resolution shall prescribe.
- 22. Subject to the provisions of the Ordinance, all new shares shall, before, issue, be offered to such persons as at the date of the offer are entitled to receive notices from the Company of General meetings in proportion, as nearly as the circumstances admit, to the amount of the existing shares to which they are entitled. The offer shall be made by notice specifying the number of shares offered, and limiting a time within which the offer, if not accepted, will be deemed to be declined, and after the expiration of that time, or on the receipt of an intimation from the person to whom the offer is made that he declines to accept the shares offered, the Directors may dispose of the same in such manner as they think most beneficial to the Company, the Director may likewise so dispose of any new shares which (by reason of the ratio which the new shares) cannot, in the opinion of the Directors, be conveniently offered under this regulation.
- 23. The new shares shall be subject to the same provisions with reference to transfer, transmission and otherwise as the shares in the original Share Capital.
- 24. The Company by Ordinary Resolution :
 - a) consolidate and divide its Shares Capital into shares of than its existing shares;
 - b) sub-divide its existing shares or any of them into starnount than is fixed by the Memorandum of Assonevertheless, to the provisions of Clause (d) of States Section 92;
 - c) cancel any shares which, at the date of the passing of the resolution, have not been taken or agreed to be taken by any person.

ny Regi

.

Transm lion.

BORROWING POWERS

Borreging 25. The Board, may from time to time for the purposes of the Company borrow Powers. 25. and raise money, funds, Term Capital, Participatory redeemable Capital from Banks, Financial Institutions and from Agencies authorised by Government to lend and secure the loans so borrowed and money raised by issuing Promissory Notes, perpetual or redeemable debenture stock, Participation Term Certificates, Modarba and Musharka and/or mortgage and cahrge the property and assets and rights of the Company both present and future subject to any law governing the same for the time being.

GENERAL MEETINGS

- Gene d Meet gs Meet gs Cene d Cene d Meet gs Cene d Meet gs Cene d Meet gs Cene d Cene
 - 27. A General Meeting, to be called Annual General Meeting, shall be held, once at least in every year within a period of six months following the close of its financial year and not more than fifteen months after the holding of its last preceding Annual General Meeting as may be determined by the Directors.
 - 28. All General Meetings of the Company other than the Annual General Meeting shall be called Extra-ordinary General Meetings.
 - 29. The Directors may, whenever they think fit, call an Extra-ordinary General Meeing and Extra-ordinary General Meetings shall also be called on such requisition, or in default, may be called by such requisitionists, as is provided by Section 159. If at any time there are not within Pakistan sufficient Directors capable of acting to form a quorum, any Director of the Company may call an Extra-ordinary General Meeting in the same manner as nearly as possible as that in which meetings may be called by the Directors.
 - 30. All business shall be deemed special that is transacted at an Extra-Ordinary Meeting, and also all business that is transacted at an Ordinary Meeting with the exception of sanctioning dividends, the reading, consideration and adoption of the Accounts and Balance Sheet and the Reports of the Directors and Auditors and other documents required to be annexed to the Balance Sheet, the election of Directors, the appointment of Auditors and the fixing of their remuneration, and the voting of extra remuneration to the Directors under Article 51 hereof.

NOTICE AND PROCEEDINGS OF GENERAL MEETINGS

Notic of Gener Meetigs,

Speci

Busin s.

31. Twenty-one days' notice at the least (exclusive of the day on which the notice is served or deemed to be served, but inclusive of the day for which notice is given), specifying the place, the day and the hour of meeting and, in case of special business, the general nature of that business, shall be given for the General Meeting, to such persons as are, under the Ordinance or the regulations of the Company, entitled to receive such notices from the Company, but the accidental omission to give notice to, or the non-receipt of notice by, any member shall not invalidate the proceedings at any General Meeting.

We all business shall be deemed special that is transacted at an Extra-ordianry reneral Meeting, and also at an Annual General Meeting except declaring a relidend, the consideration of the Accounts, Balance Sheet and the Reports of Directors and the Auditors, the election of Directors, the appointment of, and the remuneration of the Auditors.

* 33. No business shall be transacted at any General Meeting unless a quorum members is present at that time when the meeting proceeds to business.

Any corporation holding share conferring the right to vote may be resolution of its Directors or other Governing Body authorise such person as it thinks fit to act as its representative at any meeting of the Company, or at any meeting of holders of any class of shares of the Company, and the person so authorised shall be entitled to exercise the same powers on behalf of the corporation which he represents as that corporation could exercise if it had been an individual member of the Company.

QUORUM

34.

- 35. The quorum for Board meetings shall be three Directors or one third of total number whichever is greater. The quorum for General Meeting shall be five persons present personally who represent not less than twenty-five percent of the total voting power either of their own account or as proxies.
- 36. If within half an hour from the time appointed for the meeting a quorum is not present, the meeting, if called at the requisition of members, shall be dissolved; in any other case, it shall stand adjourned to the same day in the next week at the same time and place, and, if at the adjourned meeting a quorum is not present within half an hour from the time appointed for the meeting, the members present, being not less than two, shall be a quorum.
- 37. The Chairman may, with the consent of any meeting at which a quorum is present (and shall if so directed by the meetig), adjourn the meeting from time to time but no business shall be transacted at any adjourned meeting other than the business left unfinished at the meeting from which the adjournment. for ten days or more, notice of the adjourned meeting shall be given as in the case of an original meeting. Same as aforesaid, it shall not be necessary to give any notice of an adjournment or of the business to be transacted at an adjourned meeting.
- The Chairman of the Board of Directors, if any, shall preside as Chairman 38. Chairm. at every General meeting of the Company, but if there is no such Chairman, or Preside if at any meeting he is not present within fifteen minutes after the time appointed for the meeting, or is unwilling to act as Chairman, any one of the Directors present may be elected to be Chairman, and if none of the Directors is present, or unwilling to act as Chairman, the members present shall choose one of their member to be Chairman.
- 39. At any General Meeting a resolution put to the vote of the meeting shall be decided on a show of hands unless a poll is (before or on the declaration of the result of the show of hands) demanded. Unless a poll is so demanded, a declaration by the Chairman that a resolution has, on a show of hands, been carried, or carried unanimously, or by a particular majority, or lost, and an entry to that effect in the book of the proceedings of the Company shall be conclusive evidence of the fact, without proof of the number or proportion of the vote recorded in favour of, or against, that resolution.
- 40. A poll may be demanded only in accordance with the provisions of Section Poll. 167.
- If a poll is duly demanded, it shall be taken in accordance what the 41. laid down in Section 168 and the result of the poll shalls be dee resolution of the meeting at which the poll was demanded
- A poll demanded on the election of Chairman or o 42. ment shall be taken at once.
- the Commission of Part 43. In the case of an equality of votes, whether on a show ds or on a poll, the Chairman of the meeting at which the show of hands takes place, or at which the poll is demanded, shall have the right to exercise a second or casting vote.

Represent lives of corportion holding s³ res.

Guorum

Adjourneant

of meetings.

How nº :ters to be incide.

to

anner

the

urn-

otes embe . 44.

:oxy

lowe

oting

ghts

me f

ceivi

e Ins

ent c

oxy.

Subject to any rights or restrictions for the time being attached to any class or classes of shares, on a show of hands every member present in person shall have one vote except for election of Directors. On a poll every member shall have voting rights as laid down in Section 160.

 ~ 1

188 JUL 198 A.J B. L. Y.J

- 45. In case of joint-holders, the vote of the senior who tenders a vote, whether in person or by proxy, shall be accepted to the exclusion of the votes of the other joint-holders; and for this purpose seniority shall be determined by the order in which the names stand in the Register of Members.
- 46. A member of unsound mind, or in respect of whom an order has been made by any Court having jurisdiction of lunacy, may vote, whether on show of hands or on a poll, by his committee or other legal guardian, and any such committee or guardian may, on a poll, vote by proxy.
- 47. On a poll votes may be given either personally or by proxy;

Provided that a body corporate which is a member or a creditor of the Company shall vote only on the authority of a Resolution of its Board of Directors.

- 48. The instrument appointing a proxy shall be in writing under the hand of the appointor or his attorney duly authorised in writing. A proxy must be a Member.
- 49. In the case of joint-holders of a share the vote of the senior who tenders a vote, whether in person or by proxy shall be accepted to the exclusion of the votes of the other joint-holders, and for this purpose seniority shall be determined int-t ders by the order in which the names stand in the Register of Members.
 - 50. The instrument appointing a proxy and the power-of-attorney or other authority (if any) under which it is signed, or a notarially certified copy of that power or authority, shall be deposited at the Registered Office of the Company not less than forty-eight hours before the time for holding the meeting at which the person named in the instrument proposes to vote and in default the instrument of proxy shall not be treated as valid.
 - 51. An instrument appointing a proxy may be in the following Form, or a Form near thereto as may be :

Limited.

"I, of	in the District of
being a member of the	Limited, hereby appoint
of	my proxy to vote for
me and on my behalf at the (Annual,	, Extra-ordinary, as the case may be) General
Meeting of the Company to be held	on the day of
and at any adjournment thereof.	

A vote given in accordance with the terms of an instrument of proxy shall alid notwithstanding the previous death or insanity of the principal or vac tion of the proxy, or of the authority under which the proxy was executed, the transfer of the share in respect of which the proxy is given, provided t for intimation in writing of such death, insanity, revocation or transfer as cressile shall have been received by the Company at the Office before the mencement of the meeting or adjourned meeting at which the proxy is used:

DIRECTORS

recto a.

Securities

53.

:oxy

alid.

All Directors of the Company shall be natural persons. The minimum number of Directors shall not be less than seven. The following persons are at present

- Mr. Abdulah Esmail Vaid Chairman 1.
- 2. Mr. Haji Siddique M. Bawaney.
- 3. Mr. Azam Suleman Madha.
- Mr. Dawood Mohammad Dadabhoy. 4.
- 5. Mr. Mahmood G. H. Dadabhoy.
- Mr. Abdul Hamid M. Dadabhoy Chief Executive 6.

A member shall have such number of votes as is equal to the product of 54. voting shares held by him and the number of Directors to be elected;

A member may give all his votes to a single candidate or divide them between more than one of the candidates in such manner as he may choose; and the candidate who gets the highest number of votes shall be declared as Director and then the candidate who gets the next highest number of votes shall be so declared, and so on until the total number of Directors to be elected have been so elected.

- 55. A Director who may serves on any Committee, or who devotes special attention Extra to the business of the Company or who otherwise performs services which in remuneration. the opinion of the Board, are outside the scope of the ordinary duties of a Director, any be paid such extra remuneration by way of salary, percentage of profits or otherwise as the Board may determine, which shall be charged as part of the Company's ordinary working expenses.
- 56. Unless otherwise determined by the Company in General Meeting each Femuna: ion Director shall be paid out of the Fund of Company by way of remuneration for cr Director. his services a sum not exceeding Rs.500/- for each meeting of the Directors attended by him. The Directors may allow and pay to any Director who for the time being is resident, out of the place at which any meeting of the Directors may be held and who shall come to that place for the purpose of attending the meeting, such sum as the Directors may consider fair and reasonable for his expenses in connection with his attending the meeting in addition to his remuneration as above specified. Provided that any change in this remuneration shall be subject to the prior approval of the Controller of Capital Issues.
- 57. Any Director appointed to any executive office including for the purpose Special of this Article the office of Chief Executive, Chairman, or to serve in any remuner ion Committee or to devote special attention to the business of the Company or to Direc rs. who otherwise performs extra services, which in the opinion of the Directors for performing are outside the scope of the ordinary duties of the Directors, may be paid such extra deles. extra remuneration by way of salary, fees, percentage of profits or otherwise as shall from time to time determined by the Company in General Meeting (not Board of Directors). if the payment for extra services is to be made in the form of commission fixed as a percentage of profits, it will be subject to proper approval of the Controller of Capital Issues.
- 58. The maximum number of Directors shall be fixed by the Directors not Time for later than thirty five days before convening a General Meeting at wincurrent are to be elected and the number so fixed shall not be varied exceptional at a General Meeting of the Company. later than thirty five days before convening a General Meeting at which Directors fixation of
- 59. The Directors including the Chief Executive/Managing im in Dire hold office for a term of not more than three years unless a Director/Managing Director earlier under these Articles or under anac of the Ordinance. The retiring/outgoing Directors shall be eligible subject to the provisions of the Ordinance.

Mode for electing Director

offic

ors a

cutiv

Dire

Q

Remo al of Direc ors. Cred prs' right to nominate

The Company in General Meeting may remove a Director provided that Lany, resolution to that effect shall not be deemed to have been passed if the number of votes cast against such resolution is equal to or exceeds the number of votes ; secured by the last Director declared elected.

Credibirs' right 61. to no inate

60.

62.

Direc ors.

Alter ste

Direc or

Pursuant to contractual Agreements, if any, the creditors will have the right to nominate Director/Directors on the Board of Directors of the Company.

Any Director not permanently resident in Pakistan or any Director so resident but intending to be absent from the Province/Districts/City wherein the Office is situated and meetings of Directors are ordinarily held for a period of not less than three months may appoint any person acceptable to the Board to be an Alternate Director of the Company to act for him. Every such appointment shall be in writing under the hand of the Director making the appointment. An Alternate Director so appointed shall not be entitled to appoint another Director, but shall otherwise be subject to the provisions of the Articles with regard to Directors, except that he shall requires no share qualification. An Alternate Director shall be entitled to receive notices of all meetings of the Board, and to attend and vote as a Director at any such meeting at which the Director appointig him is not personally present, and generally to perform all the functions of his appointer as Director in the absence of such appointer. An Altrnate Director shall ipso facto cease to be an Alternate Director if his appointer for any reason ceases to be a Director or if and when his appointer returns a to the Province/District/City wherein the Office is situated and Meeting of the Directors are ordinarily held, or if the appointee is removed from office by notice in writing under the hand of the appointer.

POWERS AND DUTIES OF DIRECTORS

- 63. The business of the Company shall be managed by the Directors, who may exercise all such powers of the Company as are not by the Ordinance or any statutory modification thereof for the time being in force, or by these regulations, required to be exercised by the Company in General Meeting, subject nevertheless to the provisions of the Ordinance or to any of these regulations, and such regulations, being not inconsistent with the aforesaid provisions, as may be prescribed by the Company in General Meeting but no regulation made by the Company in General Meeting shall invalidate any prior act of the Directors which would have been valid if that regulation had not been made.
 - 64. The amount for the time being remaining undischarged of moneys borrowed or raised by the Directors for the purposes of the Company (otherwise than by the issue of Share Capital) shall not at any time, without the sanction of the Company in General Meeting, exceed the issue Share Capital of the Company.

egist tion f Mo gages.

ower and

Juties of

Direct 5.

65. The Directors shall duly comply with the provisions of the Ordinance, or any statutory modification thereof for the time being in force, and in particular with the provisions in regard to the registration of the particulars of mortgages and charges affecting the property of the Company or created by it, to the keeping if a register of the Directors, and to the sending to the Registrar of an annual list of Members, and a summary of particulars relating thereto and notice of any consolidation or increase of Share Capital, or sub-division of shares, and copies of Special Resolutions and a copy of the register of Director and notifications of any changes therein.

MANAGING DIRECTOR

ge Directors shall appoint one of their body as the Chief Executive/ hief Director of the Company who will hold office, unless he earlier resigns ec es disqualified otherwise, for a term of three years from the date of lanaç 7 pointment and terms and conditions and powers to be exercised by him determined by the Directors at a duly convened meeting of the Board tors. Yedwog ¥

Without prejudice to the foregoing, it hereby expressly declared that the Specific poors 67. of Eirectors Board shall have following specific powers, that is to say, power :-

To apply for an obtain such consents, sanctions, approvals, permits and Government licences, fiscal benefits and concessions from the Government of Pakistan, consents. State Bank of Pakistan or other competent authorities as may be necessary or requisite for the purposes of the Company including for foreign equity and/or loan investments in the Company.

To purchase or otherwise acquire for the Company any property, rights or To acquire 68. privileges which the Company is authorised to acquire, at such price and generally dispose of on such terms and conditions as it may think fit and, subject to the provisions and rights. of the Ordinance to sell, let, enchange, or otherwise dispose of, absolutely or conditionally, any part of the property, privileges and undertaking of the Company upon such terms and conditions, and for such consideration as it may think fit.

·.9. At its discretion to pay for any property, rights or privileges acquired To pay for or for services rendered to the Company either wholly or partially in cash or in shares, bonds, debentures or other securities of the Company, and any such shares may be issued fully paid up and any such bonds, debentures, or other securities may be either specifically charged upon all or any part of the property.

- To secure the fulfilment of any contracts, agreements entered into by the 70. Company by mortgage or charge of all or any of the property of the Company or in such other manner as it may think fit.
- To appoint and at its discretions remove or suspend such agents, mangers, To appoint 71. secretaries, officers, clerks, and servants for permanent, temporary or special officers et services as it may from time to time think fit, and to determine their powers and duties and fix their salaries or emoluments and to require security in such instances and to such amount as it thinks fit.

To appoint any persons or person, (whether incorporated or not), to accept 72. and hold in trust for the Company any property belonging to the Company, or Trustees. in which it is interested, or for any other purposes, and to execute and do all such deeds, documents and things as may be requisite in relation to any such trust, and to provide for the remuneration of such trustee or trustees.

- To institute, conduct, defend, compound or abandon any legal proceedings To bring a 73. by or against the Company or its officers, or otherwise concerning the affairs defend act is of the Company, and also to compound and allow time for payment or satisfation etc. of any debts due and of any claims or demands by or against the Company.
- To refer any claims or demands by or against the Company to arbitration, To refer t 74. and to observe and perform the awards. arbitration.
- To make and give receipts, releases and other discharges for money payable To give 75. to the Company and for the claims and demands of the Company. eipts. bankrup sacro ing
- 76. To act on behalf of the Company in all matters relating to and insolvents.
- To determine who shall be entitled to sign on the Company's beha 77. notes, receipts, acceptances, endorsements, cheques, releases, co documents.
- Change Commission 78. From time to time to provide for the management of the affairs of the To appoint. Company, either in different parts of Pakistan or elsewhere, in such manner Attorneys.

opert

٦đ

property in debentures с.

To acquire contracts b mortgage.

To appoint

hi banak

acc∋pt

Aleacts

auti

hc≘

tter

tc.

as it thinks fit, and in particular to establish branch offices and to appoint any persons to be Attorneys or Agents of the Company with such powers, (including power to sub-delegate), and upon such terms as may be thought fit.

- To evest 79. Subject to the provisions of Sections of the Ordinance to invest and deal with any of the moneys of the Company not immediately required for the purposes thereof upon such securities, (not being shares in this Company), and in such manner as it thinks fit, and from time to time to vary or realize such investments.
- To live security 80. To execute in the name and on behalf of the Company in favour of any by ay of indepnity. Director or other person who may incur or be about to incur any personal liability for the benefit of the Company, such mortgages of the Company's property, (present and future), as it thinks fit, and any such mortgages may contain a power of sale and such or the powers convenants and provisions as shall be agreed on.
- To take 81. From time to time to make, vary and repeal bye-laws for the regulation bye laws. Of the business of the Company, its officers and servants.
- To ake 82. To enter into all such negotiations and contracts and rescined and vary cor. acts etc. 82. To enter into all such negotiations and contracts and rescined and vary all such contracts and execute and do all such acts, deeds and things in the name and on behalf of the Company as it may consider expedient for or in relation to any of the matters aforesaid, or otherwise for the purposes of the Company.
- To stablish and 83. Sup: st charitable objects. To establish, maintain, support and subscribe to any charitable or public object, and any institution, society or club which may be for the benefit of the Company or its employees, or may be connected with any town or place where the Company carries on business, to give pensions, gratuities, or charitable aid to any person or persons who has/have served the Company or to the wives, children, or dependents of such person or persons, that may appear to the Directors just or proper, whether any such person, his widows children or dependants have or have not legal claim upon the Company.
- To staside 84. Subject to the provisions before recommending any dividends, to set aside prosfor portion of the profits of the Company to form a Fund to provide for such pension, gratuities, or compensation to create any Provident or Benefit Fund in such or any other manner as it may deem fit.
- To take and 85. To make and alter rules and regulations concerning the time and manner alte Rules. 85. To make and alter rules and regulations concerning the time and manner of payment of the contributions of the employees and the Company respectively to any such Fund, and the accrual, employment, suspension and forfeiture of the benefits of the said Fund, and the application and disposal thereof, and otherwise in relation to the working and management of the said Board shall from time to time think fit.
- To elegate 86. subject to the provisions of the Ordinance to delegate all or any of the powers. B6. the powers hereby conferred upon them to any Committee of Directors, to the Managing Director, or to any other person, as they may from time to time think fit including power to sub-delegate.
- Bor powers 87. The Board may exercise all the powers of the Company to borrow money, raise participatory redeemable Capital through Participation Term Certificates, and giving of sec ities. Modarba, Musharka etc. etc. (subject to compliance of law applicable to the same, debentures and other securities whether out right or collateral and mortgage & create charge on the undertakings, property and assets of the sec ities.

Powers to pay per lons etc. Regist.

The Board may pay and agree to pay pensions or other retirement, supermustions death or disability benefits or allowances to any person who may hold or may brive held any executive office or employment under the Company or any subsidiary company of the Company, or its holding company, (if any), and for the purpose of providing any such pensions or other benefits or allowances, may contribute to any scheme or fund and may make payments towards insurances in respect of such persons.

MINUTES

- 89. The Directors shall cause minutes to be made in books provided for the Minutes. purpose :
 - a) of all appointments of officers made by the Directors;
 - b) of the names of the Directors present at each meeting of the Directors and of any Committee of the Directors;
 - c) of all resolutions and proceedings at all meetings of the Company and of the Directors and of Committees of Directors.

90. And every Director present at any meeting of Directors or Committee Record of of Directors sahll sign his name in a book to be kept for that purpose. Directors'

THE SEAL

91. The Directors shall provide for the safe custody of the Seal and the Seal Common of the Board of Directors or by a Committee of Directors authorised in that behalf by the Directors and in the presence of at least one Director and of the Secretary or at least one Director or one such other person as the Directors may empower/authorise for the purpose and the one Director and Secretary or other person as aforesaid shall sign every instrument to which the Seal of the Company is so affixed in their presence.

92. The Company shall also be authorised to have Seal to be used out of Seal to be kept Pakistan subject to the provisions of the Ordinance.

DISQUALIFICATIONS OF DIRECTORS

The following persons shall not hold the office of Director of the Company : Disqualific ion

of Direct:

presence 👘

Board Me ng.

41

- (a) Persons who are not member:
- (b) Persons who have not attained age of maturity;
- (c) Persons of unsound mind;

93.

- (d) Persons who have applied to be adjudicated as insolvent and their application is sub-judice;
- (e) Persons who are undischarged insolvent;

Persons who have been convicted by a Court of law for an offence involving moral turpitude;

(f) Persons who have been debarred to hold such office declared by the Court lacking fiduciary behaviour at a the last preceding five years.

PROVIDED ALWAYS that Directors representing the Government shap for be s required to be a member OR a full time Director in the employment of the Company OR a Chief Executive/Managing Director OR a person representing no Director shall vacate his office by reason only of his being a member of any company which has entered into contracts with or done any work for the company of which he is a Director but such Director shall not vote in respect of any contract or work and if he does so vote, his vote shall not be counted.

SHARES QUALIFICATIONS OF DIRECTORS

Shar qualification of E ectors.

94. The qualification shares of minimum Rs. 25,000.00 (Rupees Twenty five thousand only) be held, in the name of person on the date he is elected as Director of the Company.

PROCEEDINGS OF DIRECTORS

- Dire ors' 95. The Directors may meet together for the despatch of business at least procedings. 95. The Directors may meet together for the despatch of business at least twice a year, adjourn and otherwise regulate their meetings, as they think fit. Questions arising at any meeting shall be decided by a majority of votes. In case of an equality of votes, the Chairman shall have and exercise a second or casting vote. A Director may and the Secretary on the requisition of a Director shall, at any time, summon a meeting of Directors. It shall not be necessary to give notice of a meeting of Directors to any Director for the time being absent from Pakistan.
- Approximent of 96. The Directors may appoint a Chairman of their meeting and determine Chairman. The terms for which he has to hold office subject to a maximum of three years from the date of his appointment, but if no Chairman is elected, or if at any meeting the Chairman is not present within ten minutes after the time appointed for holding the same or is unwilling to act as Chairman, the Directors present may choose one of their member to be Chairman of the meeting.
- Com the of 97. The Directors may delegate any of their powers not required to be exercised Dire ors. In their meeting to Committees consisting of such member or members of their body as they think fit; any Committee so formed shall, in the exercise of the powers so delegated, conform to any restrictions that may be imposed on them by the Directors.
- Chai len of 98. A Committee may elect a Chairman of its meetings; but if no such Chair-Com thee. Man is elected, or if at any meeting the Chairman is not present within ten minutes after the time appointed for helding the same or is unwilling to act as Chairman, the members present may choose one of their member to be Chairman of the meeting.
 - 99. A Committee may meet and adjourn as it thinks proper. Questions arising at any meeting shall be determined by a majority of votes of the members present. In case of an equality of votes, the Chairman shall have exercise a second or casting votes.
 - 100. All acts done by any meeting of the Directors or of a Committee of Directors or by any person acting as a Director, shall notwithstanding that it be afterwards discovered that there was some defect in the appointment of any such Directors or persons acting as aforesaid, or that they or any of them were disqualified, be as valid as if every such person had been duly appointed and was qualified to be a Director.



43

15

- The Directors shall comply with the provisions of Sections 174 to 178 and 103. Sections 180 to 184 relating to the election of Directors and matters ancillary thereto.
- Subject to the provisions of the Ordinance, the Company may from time 104. Variation of to time in Annual General Meeting increase or decrease the number of Directors. number (Directors
- 105. Any casual vacancy occuring on the Board of Directors may be filled up Filling of by the Directors, but the person so chosen shall be subject to retirement at the Casual Vinancy same time as if he had become a Director on the day on which the Director in whose place he is chosen was last elected as Director.
- 106. The Company may remove a Director but only in accordance with the Power to remo provisions of the Ordinance. a Directo from

DIVIDENDS AND RESERVE

- The Company in General Meeting may declare dividends but no dividend Declarati 107. shall exceed the amount recommended by the Directors. of Divide d.
- The Directors may from time to time pay to the members such interim Interim 108. dividends as appear to the Directors to be justified by the profits of the Company. Dividend.
- No dividends shall be paid otherwise than out of profits of the year or Dividends o be 109. any other undistributed profits.
- 110. Subject to the rights of persons (if any) entitled to shares with special rights as to dividends, all dividends shall be declared and paid according to the amounts paid on the shares, but if and so long as nothing is paid upon any of the shares in the Company, dividends may be declared and paid according to the amounts of the shares. No amount on a share in advance of calls shall be treated for the purposes of this regulation as paid on the share.
- The Directors may, before recommending any dividend, set aside out of Reserves efore 111. the profits of the Company such sums as they think proper as a reserve which declaring shall, at the discretion of the Directors, be applicable for meeting contingencies, Dividends or for equalizing dividends, or for any other purpose to which the profits of the Company be properly applied, and pending such applications may, at the like discretion, either be employed in the business of the Company or be invested in such investments (other than shares of the Company) as the Directors may, subject to the provisions of the Ordinance, from time to time think fit.
- The Directors may carry forward any profits which they may think prudent 112. not to distribute, without setting them aside as a reserve.
- 113. If several persons are registered as joint-holders of any share, any one of them may give effectual receipt for any dividend payable on the share.
- 114. Notice of any dividend that may have been declared shall be given in manner hereinafter mentioned to the persons entitled to share therein but, in the case of a public company, the Company may give such notice by ment in a newspaper circulating in the Province in which the Register company structure to situate

The dividend shall be paid within the period laid down in the Or 115.

All dividends unclaimed for one year after having been ded 116. invested or otherwise used by the Directors for the benefit of the Q the investment of payment of any unclaimed dividend or other mone on or in respect of a share into a separate account shall not constitu

paid out profits o

his office

Company a trustee in respect thereof. Any dividend unclaimed after a period of three years from the date of declaration of such dividend may be forfeited, and if so shall revert to the Company.

ACCOUNTS

- 117. The Directors shall cause to be kept proper books of accounts as required Books of under Section 230. Accounts
- o be kept. 118. The books of accounts shall be kept at the Registered Office of the Company or at such other place as the Directors shall think fit and shall be open to inspection by the Directors during business hours.
- 119. The Directors shall from time to time determine whether and to what inspection of extent and at what time and places and under what conditions or regulations the accounts and books or papers of the Company or any of them shall be open to the inspection of members not being Directors, and no member (not being a Director) shall have any right of inspecting any account and book or papers of the Company except as conferred by law or authorised by the Directors or by the Company in General Meeting.
- 120. The Directors shall as required by Section 233 and 236 cause to be prepared Profit and and to be laid before the Company in General Meeting such Profit and Loss: Loss acount Account or Income and Expenditure Accounts and Balance Sheets duly audited to be prepared. and reports as are referred in those Sections.
- Prof and 121. A Balance Sheet, Profit and Loss Account, Income and Expenditure Account Loss Account and other prescribed reports shall be made out in every year and laid before and eports. the Company in the Annual General Meeting made up to a date not more than six months before such meeting. The Balance Sheet and Profit and Loss Account, Report of the Auditors of the Company and the Reports of Directors.
- Despitch of 122. A copy of the Balance Sheet and Profit and Loss Account or Income and Bala be Sheet Expenditure Account and Reports of Directors and Auditors shall, at least and Profit and twenty-one days preceding the meeting, be sent to the person entitled to receive Loss Account. notices of General Meetings in the manner in which notices are to be given hereunder.
 - 123. The Directors shall in all respect comply with the provisions of Sections 230 to 236.

Auditors shall be appointed and their duties regulated in accordance with Sections 252 to 255.

NOTICES

Service of totice.

Book: of

Accounts.

- A notice may be given by the Company to any member either personally 124. or by sending it by post to him to his registered address if any, within Pakistan supplied by him to the Company for the giving of notices to him.
- 125. Where a notice is sent by post, service of the notice shall be deemed to be effected by properly addressing, prepaying and posting a letter containing the notice and, unless the contrary is proved, to have been effected at the time which the letter would be delivered in the ordinary course of post.

Office * Uels He member has no registered address in Pakistan, and has not supplied Karach, Commany an address within Pakistan for the giving of notices to him, e, addressed to him or to the shareholders generally and advertised in a relating in the neighbourhood of the Registered Office of the Someany shall be deemed to be duly given to him on the day on which the advertisement appears. Securities

- 127. A notice may be given by the Company to the joint-holders of a share Notice 1 by giving the notice to the joint-holder named first in the Register in respect Joint-holders, of the share.
- 128. A notice may be given by the Company to the person entitled to a share Notice in consequence of the death or insolvency of a member by sending it through Survivor the post in a prepaid letter addressed to them by name, or by the title of representatives of the deceased, or assignee of the insolvent or any like description, at the address (if any) in Pakistan supplied for the purpose by the person claiming to be so entitled, or (until such an address has been so supplied) by giving the notice in any manner in which the same might have been given if the death or insolvency had not occurred.
- 129. Notice of every General Meeting shall be given in manner hereinbefore No authorised to (a) every member of the Company except those members who, Ar having no registered address within Pakistan, have not supplied to the Company Ge an address within Pakistan for the giving of notices to them, and also to (b) Mu every person entitled to a share in consequence of the death of insolvency would be entitled to receive notice of the meeting, and (c) to the Auditors of the Company for the time being.

Notice Annual General Meeting

SECRECY

- 130. Every Director, Managing Director, Chairman, Manager, Auditor, Trustee, Member of a Committee, Officer, Servant, Agent, Accountant or other person employed in the business of the Company, shall, if so required by the Board before entering upon his duties, sign a declaration in the form approved by the Board pledging himself to observe strict secrecy representing all transactions of the Company with the customers and the state of accounts with individuals and in matters relating thereto, and shall by declaration pledge himself not to reveal any of the matters which may come to his knowledge in the discharge of his duties except when required so to do by the Board, or by any General Meeting, or by a Court of law, and except so far as may be necessary in order to comply with any provisions in these presents contained.
- 131. No member or other person, (not being a Director) shall be entitled to enter the property of the Company, or to inspect or examine the Company's premises or properties of the Company, without permission of the Board or the Chairman, and to require disclosure of any information respecting any detail of the Company's trading, or any matter which is or may be in the nature of a trade secret, mystery of trade, or secret to the conduct of the business of the Company and which in the opinion of the Board or the Managing Director will be inexpedient in the interest of the Members correction communicate.

WINDING UP

132. If the Company is wound up, the Liquidator may, with the sanction of a Special Resolution of the Company and any other sanction required by the Ordinance, devide amongst the members, in specie or kind, the whole or the part of the assets of the Company, whether they consist of property of man Rate kind or not.

For the purpose aforesaid, the Liquidator may set such villes, fair upon any property to be divided as aforesaid and may determined division shall be carried out as between the member of different members.

Commission of

The Liquidator may, with the like sanction vest the whole or any part of such assets in Trustees upon such Trusts for the benefits of the contributories, as the Liquidator, with the like sanction, think fit, but so that no member shall be compelled to accept any shares or other securities whereon there is any liability.

INDEMNITY

ndem ty. 133. Every Officer or Agent for the time being of the Company may be indemnified out of the assets of the Company against any liability incurred by him in defending any proceeding, whether civil or criminal, arising out of his dealings in relation to the affairs of the Company, except those brought by the Company against him, in which judgement is given in his favour or in which he is acquitted, or in connection with any application under Section 488 in which relief is granted to him by the Court.

ARBITRATION

Arbitr ion. 134. The Company shall be empowered to refer any existing or future difference/ dispute between itself and any other Company or person and delegate to the Arbitrators power to settle any term or to determine any matter capable of being lawfully settled or determined PROVIDED ALWAYS the provisions of Arbitration Act (X of 1940) or any substitution or re-enactment thereof.

RECONSTRUCTION

Lecon relation. 135. Subject to the provisions of Sections 284 and 287, the Company in General Meeting of the members may decide by Special Resolution to construct/amalgamate the Company with any other company at any time if it is found to be in the larger interest of the Company.

THE END



We, the several persons whose names, addresses and occupations are subscribed below, are desirous of being formed into a Company in pursuance of this Memorandum of Association and we respectively agree to take the number thares in the Capital of the Company set opposite our respective names.



6



Location maps, site maps, land



SЬ

Type of Technology.

 \mathbf{O}



Type of Technology.

Type of Technology is Natural Gas


No. of Units /Size MW

х х tar Textile Mills Limited

Details of Units of Production of Electricity.

Sr. No	Name of Production Unit	Year of Make/ Model	Start of Operat ion	Running hours	Remaining life.	Capaci ty of Produc tion of E.P	Fuel	Permission/Fitness No from Electric Inspector Govt. of Sind.	
1.	Jenbacher (NO.1) JGS 320- 1064 KW(Prime	2013 Austria (Europ) JGS320 1058 K.W.	August 2013	20556	79443 hours.	1058K W	Gas	dated 16.8.2016 1050/130	
2	Jenbacher (NO.2) JGS 320- 1064 KW(Prime	2006 Austria (Europ) JGS320 1064 K.W. Prime	August 2006	35680	64319 hours.	1064 KW	Gas	1279/3613 dated 16.8.2016	
3	Waukesha LT5794 Extended	2008 U.S.A. VH5904 LTD ESM	6 th May 2009	33322	66677 hours	900 KW	Gas	1278/3614 Dated 16.8.2016	
					v	3022 KW i-e 3.022 M. W			

Marino





GOVERNMENT OF SINDH OFFICE OF THE ELECTRIC INSPECTOR KARACHI REGION-II

Block 51 Pak Secretarial Saddar, Karachi

Dated, 11.01.2016

WE TRAINSP-16/G.P/ 1050

M/s Star Textile Mills Limited, Plot No A-41 S.I.T.E., Karachi.

SUB: PERMISSION IN ACCORDENCE WITH PROVISIONS OF THE ELECTRICITY ACT I RULES 1937 FOR THE ELECTRICAL INSTALLATIONS & EQUIPMENT / WIRING WOL GAS GENERATING SET 1058K.W (PRIME).

star Sárc

Permission is hereby accorded for carrying out the electrical installations/equipment with the terms and conditions:-

- 1 hat the electrical installations & equipment work / re-wiring work shall be got completed by the Government Licensed Electrical Contractor whose undertaking of work to be submitted to this of
- 2. That the Wiring Completion Test Certificate / Report issued by the concerned Sindh Gove Licensed Electrical Contractor should be submitted to this office for issuance of necessary certificate of the electric installations and equipment.
- 3 fliat energy generated shall only be used/ consumed within the boundaries of your own premise pot sold to other consumers.
- 4 That monthly returns of Electricity Duty in Form ".A" by the 15th of the month next after that lo month, to which the returns relates, be sent to this office.
- must the reading of energy meter be recorded in log book at the last day of the each month regula
- 6. That the amount of Electricity Duty due as per schedule of fees for the month should be deposit the Government Treasory within (30) days.
- That in case of failure to deposit the Electricity Duty within stipulated period of (30) days, you w to pay penalty in addition to the actual amount of Electricity Duty which may be equivalent to th amount of Electricity Duty due.
- 8 That the Generator should be maintained in safe working condition in accordance with the provithe Electricity Act 1910 and Rules 1937.
- ¹⁰ That operator should be appointed for the operation of generating set having Electrical Super-Wireman License from any Electric Inspectorate of Sindh Government.
- (0) That no additional Light/ Power load can be energized through the Generator without the prior a of this Electric Inspectorate.
- 11. That the Generating Set should be installed in such a manner that it must not inconvenience physically or environmentally to the general public of the locality.
- 12. That the Management will have to submit the undertaking regarding the acceptance of a terms/conditions in writing, before to put the generator in commissioning.
- 13. That the permission to use the Generator either as prime or standby can be with drawn are found defaulter in respect to non-observance of the above said terms/conditions.



MENT OF SINDH KARACHI REGION-II

 Control - University does not absolve the licensee of his responsibility.
Control - Control - Control - Control - Control - Control - Males. 1937. ouples : 101 Electric Inspector V 11 201 3 States C 12 born eage broken webend gotting in $w_{yxy} = \sum_{i=1}^{n} mon diment of its$ Les was weaked and another dependent of the CH electron for the strength of th sel vam bin bolset bin bolooqsii nood and molod novig si dolinw to nouque e-ELINESS CERTIFICATE M SUVORIA 10 KARACHI REGION COEFICE OFTHE ELECTROCINSPECTOR

601

× .	(In Word) Rupees	M/∈ ∴ar Textile Mills Limited, 2 Plot No A-41 S.I.T.E., Karachi 3	By .om tandered		Theasury Role 92) p. 가 D O CODE NO K Challen cash paid into the	111
Received Treasurer	SEVEN TH	Electric Insector to Govt of Sindh Karachi Region-II, Karachi D.D O CODE NO KA-5762	Name (or designati on) and address of the person	ę.	Rule 92) ODE NO K/ baid into the	
Received Payment (in word) Treasurer Accountant	SEVEN THOUSAND ONLY	GENERATOR SET 1058K.W	Full part- culars of the remi- tance and of authority (If any)	feilld in by the remitte	KA-5762 he <u>lircesury</u> he <u>State</u> Ba	2
n word) Rubees	ONLY	7,000 00 7,000 00 7,000 00	Arriount	đ	ury Seb - Treason Bank of Pakistan	
	To be us case of re Bank throu NOmcer o	ELECTRICITY (B03031-40) B03031 FEE PAYABLE UNDER ELECTRICITY RULES	Head of Accoupt	I o be fit Departn of the		~~~
Treasury Officer	be used only in the of remittance to the through Department through Department cer of the Treasury	Date Correct Received and Grant receipt Singnature and full desination of the Officer ordering the money to be paid in	Order to the Bank	To be field by the Department Officer of the Treasury	at Karachi	ROMSION A
					X-1-1X	

NO 1:

(ja

< i



GOVERNMENT OF SINDH OFFICE OF THE ELECTRIC INSPECTOR KARACHI REGION-II Block 51 Pak Secretariat Saddar, Karachi

PH # 021 99203315.

NO: EIK-11/INSP-16/G.P/ ₹

Dated. 16.08.2016

14,

M/s Star Textile Mills, Plot No A-41 S.I.T.E., Karachi.

5UB- PERMISSION IN ACCORDENCE WITH PROVISIONS OF THE ELECTRICITY ACT 1940 & RULES 1937 FOR THE ELECTRICAL INSTALLATIONS & EQUIPMENT 7 WIRING WORK OF <u>GENERATING SET 1064K.W (PRIME)JGS320 MANUFACTURING 2006</u>.

Dear Sir.

Permission is hereby accorded for carrying out the electrical installations/equipment work of the Generating set, subject to the following terms and conditions:-

- 1 That the electrical installations & equipment work / re-wiring work shall be got completed by the Sinth Government Licensed Electrical Contractor whose undertaking of work to be submitted to this office.
- That the Wiring Completion Test Certificate / Report issued by the concerned Sindh Government Licensed Electrical Contractor should be submitted to this office for issuance of necessary fitness certificate of the electric installations and equipment.
- 3. That energy generated shall only be used/ consumed within the boundaries of your own premises & can not sold to other consumers.
- 4. That monthly returns of Electricity Duty in Form ".A" by the 15th of the month next after that following month, to which the returns relates, be sent to this office.
- z . That the reading of energy meter be recorded in log book at the last day of the each month regularly z
- 6 That the amount of Electricity Duty due as per schedule of fees for the month should be deposited in the Government Treasury within (30) days.
- ⁵ That in case of failure to deposit the Electricity Duty within stipulated period of (30) days, you will move to pay penalty in addition to the actual amount of Electricity Duty which may be equivalent to the actual amount of Electricity Duty due.
- 8 That the Generator should be maintained in safe working condition in accordance with the provisions of the Flectricity Act 1910 and Rules 1937.
- 9. That operator should be appointed for the operation of generating set having Electrical Supervisor's Wireman License from any Electric Inspectorate of Sindh Government.
- 10. That no additional Light/ Power load can be energized through the Generator without the prior approval of this Electric Inspectorate.
- 11. That the Generating Set should be installed in such a manner that it must not create inconvenience physically or environmentally to the general public of the locality.
- 12. That the Management will have to submit the undertaking regarding the acceptance of all above terms/conditions in writing, before to put the generator in commissioning.
- 13. That the permission to use the Generator either as prime or standby can be with drawn if you are found defaulter in respect of non observance of the above said terms/conditions.



EDIRICINSPECTOR GOVERNMENT OF SINDH KARACHI REGION-II

Convitor Qarser Electric Co "K.C. 1665



INSP fee pourd RS. 7000 challenne wil df-18-8-6. GOVERNMEN COF SINDH OFFICE OF THE ELECTRICINSPECTOR S.NO. 20705 KARACHI REGION ORIGINAL is arachi, dated 30 - 08 - 2006FITNESS CERTIFICATE 15. Certified that the temporary/permanent installation at M/S Strie Textile PlotNO: A-41 11E geni Millo Katz description of which is given below, has been inspected and tested and may be connected to the Licensee's H.T. / M.P. / L.T. supply system, for Permanent Day/month, from Solari NO: BIK-11/INSP-16 /9. P/1279/ DESCRIPTION OF LOAD 3613 df - 16-8-2016 GENERATOR 1 X 1064 KW KW TRANSFORMER KWA Motoks KAW LIGHTING Electric Aspector to Govt. Karachi Region To. The E.E.S.C 660

NOTE:-This certificate does not absolve the licensee of his responsibility of testing the installation under rule 25 of the Electricity Rules, 1937,

117

											×	
	(In Word) Rupees		M/S Star Textile Mills, Plot No A-41 S.I T.E., Karachi.	Name		By whom tendered		To	Challan cash paid into the	(Treasury Rule P. D.D.O CODE		
Treasurer	SEVEN		Electric Insector to Govt of Sindh Karachi Region-II, Karachi D.D.O CODE NO KQ0486		of the person	address	Nome	be feilld	aid into the			
	NOUSAND.	· · ·	PAYMENT OF INSPECTION FEE GENERATOR SET 1064K.W	OF	authority (if any)	t on part culars of the remit- tance and of	T il porti	in by the remitte	State	DHALLAN NO 92) NO KA-5762		
	OM Y	7.000.00		Rs. Pa		Amount		litte	P -			
		0		Paisa 00		it		,	Pakistan			
	case of	B	LECTRICITY (B03031-40) 03031 FEE PAYABLE UNDER LECTRICITY RULES			Head of Account	of the	To be to Depart	2032		a	
	e used driv in s of remittance (rie Bank through		Date Correct Received and Grant recei	pt		Order to Bank	e Treasury	To be fielldin by the Department Officer	at Karach			ASK I
	nce to	5 150	Singnature and full desination of the Officer ordering the money to be pair			Order to the Bank	, VI	y the flicer	achi 8 - 16	ATE	, and	CHANT ST

•

11+

 $\sim \kappa_{\rm h}$

2







Знерго-Моторы

Jenbacher gas engines **Technical Specification**

>>> Scope of supply genset - JGS 320 GS-N.L

Basic engine equipment:

*Exhaust gas turbocharger, Intercooler *Motorized carburator for LEANOX control Electronic contactless high performance ignition system *Lubricating oil pump (gear driven) *Lubricating oil filters in main circuit *Lubricating oil sump; Lubricating oil heat exchanger *Jacket water bump *Fuel-, lubricating oil and jacket water pipe work on engine *Flywheel for alternator operation; Exhaust gas manifold *Viscous damper *Knock sensors

Engine accessories:

*Electric starter motor

*Electronic speed governor

- *Electronic speed monitoring device including starting and overspeed control
- "Transducers and switches for oil pressure, jacket water temp., jacket water pressure, charge pressure and mixture temperature *One thermocouple per cylinder

Supplied loose:

Gas train according to DIN-DVGW consisting of: *Manual stop valve, fuel gas filter, two solenoid valves. Leakage control device, gas pressure regulator

Documentation:

*Operating and maintenance manual *Spare parts manual *Drawings

Assembly, painting, testing in Jenbach/Austria

>>> Scope of supply module - JMS 320 GS-N.L

Identical to Genset except that heat recovery is included. *jacket water heat exchanger mounted on module frame "exhaust gas heat exchanger mounted as separate heat recovery module all heat exchangers with complete pipework *Heat exchangers and all inherent auxiliaries

>>> Scope of supply container - JG(M)C 320 GS-N.L

*Identical to module/genset but installed in 40' ISO container (65 dB(A) @ 10m); complete with all pipework and fittings *Twin circuit radation cooler for dissipation of intercooler jacket water and lube oil thermal output; ventilation equipment "Gas & smoke detectors; exhaust silencer; lube oil equipment; starting system flexible connections *Separate control room complete with generator switchgear and all internal power and monitoring cables

+7 (343) 200-01-74 8-800-700-54-47 бесплатно по России www.energo-motors.com

Module equipment:

*Base frame for gas engine, alternator and heat exchangers Internal pole alternator with excitation alternator and with automatic voltage regulator; p.f. 0.8 lagging to 1.0

*Flexible coupling, bell housing *Anti-vibration mounts

"Air filter

- *Automatic lube oil replenishing with level control
- "Wiring of components to module interface panel
- *Crankcase breather
- *Jacket water electric preheating

Module control panel:

*Totally enclosed , single door cubicle, wired to terminals and ready to operate, protection IP 41 outside,

IP 10 inside, according to VDE-standards

- Control equipment:
- *Engine-Management-System dia ne (Dialog Network) *Visualisation (industry PC-10" color graphics display): Operation data controller display, Exh. gas temp., Generator electr. connection, etc.

- **Central engine- and module control: Speed-, Power output-LEANOX-Control and knock control, etc.
- *Multi-transducer
- *Lockable operation mode selector switch Positions: "OFF", "MANUAL", "AUTOMATIC *Demand switch



Engine data:

Piston displacement

Nominal speed

Engine type

Bore

Stroke

Configuration No. of cylinders





dB(A)

95

JMS 320 GS-N.L Natural gas 1.063kW el.

Electrical output	kW el.	1.063
Recoverable thermal output (120 °C)	k₩	1.190
Energy input	kW	2.607
Fuel Consumption based on a LHV of		
9,5 kWh/Nm³	Nm³/h	274
Electrical efficiency	%	40,8%
Thermal efficiency	%	45,6%
Total efficiency	%	86,4%
Heat to be dissipated (LT-Circuit)	kW	64

NOx < 500 mg/Nm3 (5% O2)

mm

mm lit

rpm

J 320 GS-C05

V 70°

20

135 170

48,67

1.500

Sound pressure level exhaust gas (1m, 30* off engin	dB(A)	121
Exhaust gas mass flow rate, wet	kg/h	5.680
Exhaust gas volume, wet	Nm³/h	4.401
Max.admissible exhaust back pressure after engine	mbar	60
Exhaust gas lemperature at full load	°C [8]	427
Combustion air mass flow rate	kg/h	5.493
Combustion air volume	Nm³/h	4.249
Max. inlet cooling water temp. (intercooler)	°C	40
Max. pressure drop in front of intake-air filter	mbar	10
Return temperature	°C	70
Forward temperature	°C	90
Hot water flow rate	m³/h	51,1
Alternator:		
Manufacturer		STAMFORD
Туре		PE 734 C2
Type rating	kVA	1.550
т теренциятова стала как жило роко с сталано с 1		:
Efficiency at p.f. = 1,0	%	97.1%
Efficiency at p.f. = 0,8	%	96.0%
Ratings at p.f. = 1,0	k₩	1.063
Ratings at p.f. = 0,8	kW	1.051
Frequency	Hz	50
Voltage	V	400
Protection Class		JP 23
Insulation class	5 E S. H	} , H
		1. De
Speed	g r¢m **	1,500

Additional information:

Sound pressure level (engine, average value 1m)

Mean piston speed 8,5 m/s Mean effer press, at stand, power and nom, sp bar 18,00 Epsilon Compression ratio 12,5 ISO standard fuel stop power ICFN kW 1095 Spec. fuel consumption of engine kWh/kWh 2,38 Specific lube oil consumption g/kWh 0,30 Weight dry kg 5.000 370 61 Filling capacity lube oil MZ 70 Based on methane number

Technical parameters:

based on DIN-ISO 3045 Based on VDE 0530 REM with specified tolerance Air pressure 1000 mbar or 1000 m bh Air temperature: 25°0 -Relative Humite Applicable standards: Standard conditions Engine output derating. for plants installed at > 500m above elevel and/or intake temperature > 30°C, the reduction of engine power is determined for each project. Gas quality according to TA 1000-0300 Gas flow pressure: 80 - 200 mbar (Lower gas pressures upon inquiry) Max. variation in gas pressure: ±10% Ż +7 (343) 200-01-74 8-800-700-54-47 бесплатно по России www.energo-motors.com

tar Textile Mills Limited

(3)	
Waukesha LT5794	900 KWx1
Extended Series	
Model :	VHP5904
	LTD ESM
Weight	16800
Voltage	kRPM=1000 416-240
Voltage Year of Manufacturing:	2008
KW	900
KVA	1125
Ampere	1565A
Make:	USA
Make: Power Factor=0.8PF	USA
Power Factor=0.8PF	м ²
	USA 50 HZ
Power Factor=0.8PF Frequency	50 HZ
Power Factor=0.8PF	50 HZ :33,322 bours
Power Factor=0.8PF Frequency	50 HZ :33,322 bours
Power Factor=0.8PF Frequency Operating hours Remaining hours:	50 HZ :33,322 hours 66677 hours
Power Factor=0.8PF Frequency Operating hours Remaining hours: Start up	50 HZ :33,322 hours 66677 hours
Power Factor=0.8PF Frequency Operating hours Remaining hours:	50 HZ :33,322 hours 66677 hours



GOVERNMENT OF SINDH OFFICE OF THE ELECTRIC INSPECTOR **KARACHI REGION-II** Block 51 Pak Secretariat Saddar, Karachi

PH#02199203315.

NO: EIK-11/INSP-16/G.P/ 1278,

Dated. 16.08.2016

M/s Star Textile Mills, Plot No A-41 S.I.T.E., Karachi.

PERMISSION IN ACCORDENCE WITH PROVISIONS OF THE ELECTRICITY ACT 1910 & SUB: RULES 1937 FOR THE ELECTRICAL INSTALLATIONS & EQUIPMENT / WIRING WORK OF GENERATING SET 900K.W (PRIME) VHP5904LTD ESM_MANUFACTURING 2008.

Dear Sir.

Cops for

1'0

Permission is hereby accorded for carrying out the electrical installations/equipment work of the Generating set, subject to the following terms and conditions:-

- That the electrical installations & equipment work / re-wiring work shall be got completed by the Sindh ì Government Licensed Electrical Contractor whose undertaking of work to be submitted to this office.
- That the Wiring Completion Test Certificate / Report issued by the concerned Sindh Government Licensed Electrical Contractor should be submitted to this office for issuance of necessary fitness certificate of the electric installations and equipment.
- 3. That energy generated shall only be used/ consumed within the boundaries of your own premises & car not sold to other consumers.
- 4. That monthly returns of Electricity Duty in Form ".A" by the 15th of the month next after that following month, to which the returns relates, be sent to this office.
- That the reading of energy meter be recorded in log book at the last day of the each month regularly. 5.
- o. That the amount of Electricity Duty due as per schedule of fees for the month should be deposited in w the Government Treasury within (30) days.
- That in case of failure to deposit the Electricity Duty within stipulated period of (30) days, you will have to pay penalty in addition to the actual amount of Electricity Duty which may be equivalent to the actual amount of Electricity Duty due.
- 8. That the Generator should be maintained in safe working condition in accordance with the provisions of the Electricity Act 1910 and Rules 1937.
- That operator should be appointed for the operation of generating set having Electrical Supervisor's 0 Wireman License from any Electric Inspectorate of Sindh Government.
- 10. That no additional Light/ Power load can be energized through the Generator without the prior approval of this Electric Inspectorate.
- 11. That the Generating Set should be installed in such a manner that it must not create inconvenience physically or environmentally to the general public of the locality.
- 12. That the Management will have to submit the undertaking regarding the acceptance of all above terms/conditions in writing, before to put the generator in commissioning.
- 13. That the permission to use the Generator either as prime or standby can be with drawn if you are found defaulter in respect of non observance of the above said terms/conditions.

SPECTOR GOVERNMENT OF SINDH KARACHI REGION-II 1. Qaiser Electric Co K C 166

p fee paid RS. 7000/2 Challan No. Nit dt- 18-8-2016 GOVERNMENTOFSHIDH OFFICE OF THE ELECTRIC INSPECTOR S.NO. 20707 KARACHI REGION ORIGINAL rachi, dated 30-8-2006 FITNESS CERTIFICATE Certified that the temporary/permanent installation at M/15 Stars Textile ILS PLOTNO. A-41 SITIZ Korgechi Mills Katagchi description of which is given below, has been inspected and tested and, may be connected to the Licensee's H.T. / M.P. / L.T. supply system. for Persmanent Day/ month. from VOD and NO BIK-11/INSP/16/9 P/12781 DESCRIPTION OF LOAD 364 dt- 16-8-2046 GENERATOR 1× GOOLOW ΚW Manil TRANSFØRMER КŅ MOTØRS KW LIGHTING Electric or to Govt achi Region Το, The E. E. S

NOTE:-This certificate does not absolve the licensee of his responsibility of testing the installation under rule 25 of the Electricity Rules, 1937,

124

9 9	(In Word) Rupees	M/S Star Textile Mills, Plot No A-41 S.I.T.E., Karachi.	By whom tendered	To	(Treasury P- D.D.O CO
	SEVEN TI	Electric Insector to Govt of Sindh Karachi Region-II, Karachi D.D.O CODE NO KQ0486	Name (or designati on) and address of the person	o be feilld in	aid in
A State	THOUSAND ONL	PAYMENT OF INSPECTION FEE OF GENERATOR SET 900K.W	Full parti- culars of the remit- tance and of authority (if any)		CHALLAN NO 92) NO KA-5762 NO the Treasury State Ban
Come Contractor	ONLY	7,000 7,000 00 7,000 00		litte	NO. ury Sub - Treasury Bank of Pakistan
and the second s	To be us case of Ban	ELECTRICITY (B03031-40) B03031 FEE PAYABLE UNDER ELECTRICITY RULES	Head of Account	To be fie Departn of the	
Traesury Office	To be used only in the case of remittance to the Bank through	Date Correct Received and Grant receipt Singnature and full desination of the Officer ordering the money to be paid in	Order to the Bank	alldin i hent C Treas	PROVISIONAL ORIGINAL DUPLICATE at Karachi at Karachi
· ·		Concer ordening the money to be paid in			OWWIND EIK

...

•

133

 J_{θ}

SU

rformance data

		Continuo	us Power
itercoal	er Water Temperature 130°F (54°C)	60 Hz 1200 RPM	50 Hz 1000 RPM
	Power bhp (kWb)	1450 (1081)	1208 (901)
	BSFC (LHV) Btu/ohp-hr (kJ/kWh)	7535 (10663)	7457 (10548)
	Fuel Consumption Btu/hr x 1000 (kW)	10926 (3202)	9008 (2640)
	NOx g/bhp-hr (mg/Nm² @ 5% O2)	2.00 (810)	2.00 (810)
sions	CO g/bhp-hr (mg/Nm* @ 5% 02)	1.80 (730)	1.70 (698)
Emissions	NMHC g/bhp-hr (mg/Nm³ @ 5% 0₂)	0.34 (140)	0.39 (156)
	THC g/bhp-hr (mg/Nm³ @ 5% O ₂)	2.30 (931)	2.60 (1043)
	Heat to Jacket Water Btu/hr x 1000 (kW)	2696 (790)	2234 (655)
c.	Heat to Lube Oil Btu/nr x 1000 (kW)	472 (138)	373 (109)
Hoat Balance	Heat to intercooler Btu/hr x 1000 (kW)	518 (152)	367 (108)
<u> </u>	Heat to Radiation Btu/hr x 1000 (kW)	451 (132)	435 (127)
	Total Exhaust Heat Btu/hr x 1000 (kW)	3311 (970)	2698 (791)
	Induction Air Flow scfm (Nm³/hr)	3169 (4773)	2612 (3934)
Intake/ Exhaust Svstem	Exhaust Flow lb/hr (kg/hr)	14229 (6454)	11730 (5321)
ម្មីភី	Exhaust Temperature °F (°C)	895 (479)	882 (472)

All data according to full load and subject to technical development and modification.

Consult your local GE Power's Distributed Power representative for system application assistance. The manufacturer reserves the right to change or hodity without notice, the design or equipment specifications as herein set forth without incurring any obligation either with respect to equipment previously sold or in the process of construction except where otherwise specifically guaranteed by the manufacturer.

GE's Distributed Power global service network provides life cycle support for more than 36,000 reciprocating engines worldwide to help you meet your business challenges and success metrics anywhere and anytime. Backed by our authorized service providers in more than 170 countries, our service network connects with you locally for rapid response to your service needs.

Find your local support online: www.gepower.com/distributedpower CE Power's Distributed Power business is a unit of the General Clerinic Company. The GC brand and logo are trademarks of the use real Electric Company, 9 2016 General Electric Company. Information provided is subject to change without notice. All values are design or typical values when measured under laboratory conditions. 0216 GEA-19050



Waukesha*gas engines VHP*Series Four* L5794LT 1208 - 1450 BHP (901 - 1081 kWb)



Image is representative of engine model.

GE's Waukesha Series Four rich-burn engines are the engines of choice for the harshest and most demanding gas compression, power generation and mechanical drive applications. The Series Four engines can reliably produce more power on hot field gases, at high altitudes, and in remote locations, all while delivering low emissions when paired with a 3-way catalyst (NSCR).

technical data

Cylinders	V12
Piston displacement	5738 cu. in. (95 L)
Compression ratio	10.2:1
Bore & stroke	8.5" x 8.5" (216 x 215 mm)
Jacket water system capacity	107 ga!. (405 L)
Lube oil capacity	190 gal. (719 L)
Starting system	125 - 150 psi air/gas 24V electric

Dimensions	i x w x	h inch	(mm)
------------	---------	--------	------

147 (3734) × 85 (2159) × 97.83 (2485)

Weights Ib (kg)

24,250 (11,000)

"Trademark of General Electric Company

Year of Make/Model. **Operation** date and expected remaining life



Details of Units of Production of Electricity.

Name of	Year of	Start	Running	Remaining	Capaci	Fuel	Permission/Fitness	
Production	Make/	of	hours	life.	ty of		No from Electric	
Unit	Model			Ì				
		ion					Sind.	
Lophochor	2012	August	20556	70442	· · · · · · · · · · · · · · · · · · ·		1.1.146.0.2046	
			20556		1	Gas		
JGS 320-		2015		nours.	vv		1050/130	
1058								
KW(Prime	1058							
	K.W.		-					
Jenbacher	2006	August	35680	64319	1064	Gas	1279/3613 dated	
		2006		hours.	КW		16.8.2016	
the second se								
]					
Waukesha	2008	6 th	33322	66677	900	Gas	1278/3614 Dated	
LT5794	U.S.A.	May		hours	кw		16.8.2016	
Extended	VH5904	2009						
	LTD				ļ			
	ESM							
					3022			
							1	
					1			
					M. W		Lit's	1
								en e
								main
	Unit Jenbacher (NO.1) JGS 320- 1058 KW(Prime Jenbacher (NO.2) JGS 320- 1064 KW(Prime Waukesha	Unit Model Jenbacher 2013 (NO.1) Austria JGS 320- (Europ) 1058 JGS320 KW(Prime 1058 Jenbacher 2006 (NO.2) Austria JGS 320- (Europ) 1058 K.W. Jenbacher 2006 (NO.2) Austria JGS 320- (Europ) 1064 JGS320 KW(Prime 1064 K.W. Prime Waukesha 2008 LT5794 U.S.A. Extended VH5904 LTD LTD	UnitModelOperat ionJenbacher2013August(NO.1)Austria2013JGS 320-(Europ)20131058JGS3201058KW(Prime2006AugustJenbacher2006August(NO.2)Austria2006JGS 320-(Europ)2006JGS 320-(Europ)1064JGS 320-1064JGS320KW(Prime1064VH5904Waukesha20086 th LT5794U.S.A.MayKtendedLTD2009	UnitModelOperat ionJenbacher2013August20556(NO.1)Austria20132013JGS 320- 1058(Europ)205564000JGS320JGS32010584000KW(Prime2006August35680JGS 320- (NO.2)2006August35680JGS 320- (NO.2)2006400035680JGS 320- (S 320- (Europ)200640004000JGS 320- (Europ)106440004000JGS 320- (Europ)106440004000JGS 320- (Europ)106440004000JGS 320- (Europ)106440004000JGS 320- (Europ)106440004000JGS 320- (Europ)106440004000JGS 320- (Europ)106440004000JGS 320- (Europ)106440004000KW(Prime20086 th 33322Waukesha Extended200940094009LTDLTD40004000	Unit Model Operat ion Operat ion Image: Second seco	UnitModelOperat ionProduc tion of E.PJenbacher2013August20556794431058K(NO.1)Austria2013Iosshours.WJGS 320- 1058(Europ)JGS320IossWIossJGS 320- 1058JGS320IossIossIossIossKW(Prime2006August35680643191064(NO.2)Austria2006IossKWKWJGS 320- (NO.2)(Europ)2006IossKWJGS 320- 	UnitModelOperat ionOperat ionProduc tion of E.PJenbacher (NO.1) JGS 320- 1058 (Europ) 1058 KW(Prime2013August 20132055679443 hours.1058K WGasJenbacher (NO.1) JGS320 1058 KW(Prime2013August 20132056079443 hours.1058K WGasJenbacher (NO.2) JGS 320- (Europ) 1064 (S320 Hours)2006August 20063568064319 hours.1064 KWGasVO.2) JGS 320- (Europ) 1064 KW(Prime2006August 20063568064319 hours.1064 KWGasWaukesha LT5794 Extended20086 th LTD ESM3332266677 hours900 KWGasWaukesha LT5794 ESM2009IncIncIncIncInt <td< td=""><td>UnitModelOperat ionOperat ionProduc tion of E.PInspector Govt. of Sind.Jenbacher (NO.1) JGS 320- (Europ) 1058 K.W(Prime2013 (Europ) 1058 K.W.August 201320556 Pa43 hours.79443 hours.1058K WGas Gasdated 16.8.2016 1050/130Jenbacher (NO.2) JGS 320- (Europ) 1064 JGS 320- (Europ) 1064 JGS 320- 1064 KW(PrimeAugust 200635680 August 200664319 hours.1064 KWGas Fast Austria 1064 KW1279/3613 dated 16.8.2016Waukesha LT5794 Extended2008 U.S.A. VH5904 LTD ESM6th August 200933322 Fast August </td></td<>	UnitModelOperat ionOperat ionProduc tion of E.PInspector Govt. of Sind.Jenbacher (NO.1) JGS 320- (Europ) 1058 K.W(Prime2013 (Europ) 1058 K.W.August 201320556 Pa43 hours.79443 hours.1058K WGas Gasdated 16.8.2016 1050/130Jenbacher (NO.2) JGS 320- (Europ) 1064 JGS 320- (Europ) 1064 JGS 320- 1064 KW(PrimeAugust 200635680 August 200664319 hours.1064 KWGas Fast Austria 1064 KW1279/3613 dated 16.8.2016Waukesha LT5794 Extended2008 U.S.A. VH5904 LTD ESM6 th August 200933322 Fast August

Installed Capacity

140



Details of Units of Production of Electricity.

Sr.	Name of	Year of	Start	Running	Remaining	Capaci	Fuel	Permission/Fitness
٧o	Production	Make/	of	hours	life.	ty of		No from Electric
	Unit	Model	Operat			Produc		Inspector Govt. of
			ion			tion of		Sind.
						E.P		
1.	Jenbacher	2013	August	20556	79443	1058K	Gas	dated 16.8.2016
	(NO.1) JGS 320-	Austria	2013		hours.	W		1050/130
	1058	(Europ)						
	KW(Prime	JGS320					1	
	ic o (i i inic	1058						
2	Jenbacher	K.W. 2006	August	35680	64319	1064	Gas	1279/3613 dated
2	(NO.2)	Austria	2006	33000	hours:	1064 KW	Gas	16.8.2016
	JGS 320-	(Europ)	2000					10.8.2010
	1064	JGS320						
	KW(Prime	1064						
		K.W.						
		Prime						
3	Waukesha	2008	6 th	33322	66677	900	Gas	1278/3614 Dated
	LT5794	U.S.A.	May		hours	кw		16.8.2016
	Extended	VH5904	2009					
		LTD						
		ESM						
						3022		
						кw		ية مستقبلية . وي من يوني المحمد من يوني المحمد
						i-e		
						3.022		
						M. W		
								· · · · · · · · · · · · · · · · · · ·
								فطل
								*

Fuel(oil/gas): Type, imported/ indigenous,: Supplier, logistics,: Pipelines etc. in case of Gas fuel, a Gas Sale Agreement (GSA) signed between applicant and Gas supplier.

14-+

tar Textile Mills Limited

Fuel (Oil/Gas:

Type:

Supplier:

Fuel is Natural Gas.

Indigenous.

Sui Southern Gas Company Limited successor of Karachi Gas Co. Ltd.

Logistics:

Pipelines.

In Case of Gas Fuel, a Gas Sale Agreement (GSA)signed between applicant and Gas Company .

Attached.

149



BY THIS CONTRACT, made between KARACHI GAS COMPANY LIMITED thereinafter referred to as "the 641 11

5

Company") and (full name, description and postal address of the consumer 64

thereinafter called "the Consumer"), the Consumer agrees to purchase from the Company and the Company agrees to supply to the Consumer, natural gas at (full description and location of the premises)

for (full description of purpose).

so terms and conditions hereinafter set forth t-

TERMS AND CONDITIONS

(1) (i) Immediately after the execution of this agreement by the Consumer, the Consumer shall pay to the Company a sum of Rs, as gas supply deposit or furnish a bank guarantee in lieu there of for the performance of his obligations hereunder.

(ii) If subsequent to the execution of this agreement by the Consumer and the Company,

- (a) the Consumer shall desire installation of additional burner equipment entailing increase in consumption of gas by the Consumer or the usual consumption of gas by the Consumer shall be otherwise increased, $\frac{1}{2}$
- (b) Or the price of gas or rent for meter shall be increased in accordance with the terms of this agreement;
- (o) or any new tax or charge shall be levied on gas by any Government or local or other authority or any such tax or charge already levied on gas shall be increased; then in addition to the sum mentioned in sub-clause (i) above, the Company shall have a right to demand from the Consumer and the Consumer on such demand pay to the Company such amounts on account of additional deposit, as the Company may deem necessary or expedient.

Provided the total amounts required to be deposited under sub-clause (i) and (ii) of this clause shall not exceed the amount which, according to the estimate that the Company may from time to time make, the Consumer may have to pay to the Company under this agreement on account of probable consumption of gas in three months toge her with taxes and charges payable thereon and three months rent for meter.

(3) (i) Subject to the provisions hereinafter made, the Consumer shall pay to the Company price for the gas supplied , the Consumer at the following current rates, provided the minimum amount payable by the Consumer for as consumption shall in no case be less than Rs. 75.00 per month :-

> GAS RATES FOR O'NEPEL INDUSTRIAL CONSIMERS First 10,000 thousad ou fr m. month Rs 5.60 per thousand ou fr Next 90,000 thousand ou ft jur moath Rs 5 52 per thousand ou ft. Next 100,000 thousand on It per mouth Rs 5.45 per the again on ft Mont 100,000 thousand en it par month Rs 5.37 per thousand ou ft All over 300,000 thousand ou it per month Rs 5 30 pr. thousand or R. Miaining, Chages Ps 75]- per nic. W

- The Consumer shall also pay to the Company rent of the weter at the rate of R5; per month from the date on which the meter is fixed upto the date when the same shall be removed, provided, if the quantity of gas consumption necessitates replacement of meter by a meter of different size the Consumer shall pay rent of the new meter at the rate prescribed by the Company for such meter. $\langle \mathbf{\hat{n}} \rangle$
- (iii) In addition to the price of gas, the Consumer shall also pay to the Company all taxes or charges levied on natural gas by any Government or local or other authority.

(3) The register of the meter shall be prima facie evidence of the quantity of ges consumed by the Consumer but should the accuracy of the meter be disputed and the meter be officially tested by the Company and be found to register or one ously, the register of the meter shall be rectified according to the degree of inaccuracy detected on such testing for the period the meter has registered inaccurately, if such period is known or ascertainable and if such period is not knewn or ascertainable, then the period of adjustment in the register of the meter and or gas bills shall be from the date of pravious meter reading.

(1) In crite the the meter shall, for any cause whatsoever, cease or oldit to register regularly the quantity of gasused, the Consumer shall pay to the Company for the gas supplied to him during the period the meter shall so remain out of order on the blass of average monthly consumption of gas by the Consumer shring the two months immediately preceding or following the month in which the meter so remained dat of or her whichever is more.

151

Harak

- (3) (3) Where the metering pressure exceeds 6 inches water column above atmospheric pressure, the unit of volumetric measurement shall be one cubic foot of gas at an absolute pressure of 14.65 pounds per square inch and 60 degrees Fahrenheit without adjustment for water vapour content and required correction factors such as pressure, temperature, specific gravity, deviations from Boyle's Law, expansion and Reynold's number shall be applied. The value of atmospheric pressure for calculating the pressure factor shall be 14.65 pounds per square inch and the value of acceleration due to gravity shall be 32.17 feet per second per second. The gas delivered hereunder shall be measured in accordance with methods in use in the industry generally and recommended by the Gas Measurement Committee of the Natural Gas Department of the American Gas Association, applied in a practical manner.
 - (ii) Where the metering pressure does not exceed 6 inches water column above the atmospheric pressure, the unit of volumetric measurement shall be one cubic foot of gas at metering pressure and temperature without adjustment for water vapour content.

(i) All amounts due to the Company hereunder shall be payable on demand irrespective of any deposit in hand and shall be paid at the Company's office or at the authorised branches of COMMERCE BANK LTD, within lifteen days,

(7) All pipes and fittings from the main to the inlet of the meter station shall be laid and fixed by the Company who shall provide and lay a service pipe from the main to the meter station. The meter station shall be located close to the boundary wall within the Consumer's premises described hereinbefore and at a place nearest to the Company's service. All pipes and fittings on and beyond the outlet of the meter station shall be provided by and at the expense of the Consumer, the Company not being responsible for leakage of gas from, nor for repairs to such pipes or fittings. The service valve and the jipe of meter and the meter station shall be installed and kept in repair by the Company five of charge. The Consumer shall be responsible for the safety and protection of the meter station and the said property of the Company and shall be liable for any damage caused thereto by five or other accidents or due, to carelessness of any one whomsolver not in the Company's employment.

(8) The Company shall retain the title to and ownership of all regulators, meters, pipes, devices and other propertyinstalled by it upon the said premises, and may remove or replace the same at any time before or after the termination of the contract.

(9) The Company shall have the right to provide further connections to other parties or premises from the outlet of the regulator installed for the purpose of supplying gas to the above mentioned premises of the Consumer but the cost of any alteration in or addition to the pipes and fittings incidental therete shall not be borne by the Consumer.

(10) No meter shall be connected to or disconnected from the gas pipes except by the authorised personnel of the Company. The meters shall be inspected periodically, but the Company's personnel shall have free access at all reasonable times to gas installations at the said premises of the Consumer.

(11) Alterations in or additions to gas installations will be made only by the Company, but the Company may in exceptional cases exercise its discretion to permit the Consumer to undertake alterations in or additions to the gas installations. Such premission must be obtained in writing from the Company in advance.

(12) The Consumer shall not make or maintain any connection with the fuel/gas pipes of any other person or corporation during the subsistence of this contract without the written consent of the Company.

(13) As the production of gas from wells and the conveyance of it are subject to accidents; interruptions and failures, and the lines and equipment to breaking, freezing, failures and closing; which cannot be foreseen or prevented by any reasonable care or expenditure, and as the supply of gas and transportation facilities are limited, the Companydoes not by this contract undertake to furnish to the Consumer a fail and uninterrupted supply of gas but only to furnish used supply and for such length of time as it reasonably can; and x is expressly agreed to by the Consumer that the Company shall not be liable for any loss, damage, or injury that may reach the directly or indirectly from shortages or interruptions in the supply of gas or from discontinuume thereof due to the said reasons or as a result of labour strikes, lockouts, riots, civil commotions, hostilities, wars, epidemes, calminder, natural disasters or causes beyond the ordinary reasonable control of the Company.

(14) The Company shall have the right to close or intercept gas capply 10 the Consumer's premises for shorf periods after giving at least 24 hours notice in advance for carrying out necessary extension, repair and or alteration work in the Company's pipe lines, equipment and devices.

15) The Company shall have the right to curtail deliveries of gas to the Consumer consuming gas in excess of 3,000 cu. ft. per hour whenever and to the extent necessary in its sole jucgment. For the protection of service to its other consumers.

(16) The Consumer knowing its inflammable character shall take all precautions in the use of gas and maintenance of gas installations on his premises and shall be solely responsible for any loss, datable, injury or raccident resulting directly or indirectly and for any reason whatsoever from gas or gas installations. The Consumer shall indemnify the Company against all demands and claims for any such loss, damage injury or accident

(17) The contract shall not be binding or in force until approved and signed by the proper Officer of the Company duly authorised in this behalf, and no promise or agreement or representation made by any agent or employee in soliciting the same or otherwise, shall bind the Company e respire the extent herein provided.

(13) We hout prejudice to any other right that the Company may have and in addition to such right, the Company shall be entitled to rescind this contract at any time for the following reasons :-

- (a) Neglect or default of the Consumer to pay the bill rendered by the Company for any month's supply of gas or other dues payable by the Consumer within the period specified in clause 6 hereof;
- (b) Any action by Municipal authorities or any legal proceedings against the Company by any party interfering with the Company's right to supply gas or collect does payable to use Contrany hereunder ;
- (c) Any action by the Consumer to secure through his incire gas for other purposes that that mentioned hereinabove or for another party, without the written consent of the Company;

Allin

- (d) Any action by the Consumer tending to secure more gas than the meter registers or to secure gas through the meter at a higher pressure than that at which the regulators are set by the Company or any interference by the Consumer with the meters or regulators tending to prevent the same from properly operating and correctly registering;
- (c) Any action of the Consumer to break the seals or to tamper with the gas installations in any way whatsoever in order to secure manthorised supply of gas and or to indulge in unsafe usage of gas ;
- fr Auy alteration, addition or extension to the existing gas installation carried out by the Consumer without obtaining prior approval of the Company in writing ;

(j) . Violation of or default in compliance with any of the terms and conditions of this contract.

(ii) In case the premises of the Consumer mentioned above or the property thereon, shall be attached or thre atened with attachment in execution, or in case of assignment, backruptcy or any act of insolvency, on the part of the Consumer, the contract shall, at the option of the Company, become null and void and the Company shall have the tight to remove any or all of its property from the premises of the Consumer.

(20) Fither of the parties hereto may, at his absolute will, determine this contract by one month's notice of his intention to do so to be given in writing to the other party and this contract shall remain in force until so determined, in the case of determination of this contract under this clause, no party shall be entitled to any damages or compensation of the any loss or injury arising from such determination of this contract.

(10) on case the Company shall, either by publication or letter despatched by ordinary post, give fifteen days' notice of a change in the price of gas, the Consumer may elect to terminate the contract at the end of such period. If the basener does not terminate the contract in writing and or continues to take gas after expiration of the fifteen days acceeding the said notice, the Consumer shall be bound to pay to the Company price of gas consumed by him at the rates so notified to him, which shall thereafter form part of this contract in place of the rates mentioned in clause 2 hereof.

(1) In the case of termination of the contract for any cause whitsoever, all claims for gas supplied and or services rendered by the Company upto the date of disconnection of gas supply shall become forthwith due and payable without achieve from the Company and the Consumer shall pay same on demand.

13: The responsibility for making payment shall be that of the Consumer – If the monthly bill is not received by the consumer in time, the Consumer shall immediately apply to the Company in writing for the issue of such bill or a copy thereof.

 $C^{(2)}$ in these ont of disconnection at the request of the Consumer or due to any default on his part a sum of Res 50.00 as reconnection fee shall have to be paid by the Consumer before the gas supply is restored by the Company, finite and or other necessary equipment.

Caraches Dated <u>B1- H-75</u> S'ONED BY THE CONSUMER	SIGNED FOR AND ON BEHALF OF KARACHI GAS COMPANY LIMITED					
20 Star Toxtile Milla Lta.						
Caus Diroctoraine	- K.Mymo					
Residential Address	12 102 b. t					
Telephone {	M.D					
(Works						
LANDLORD'S PERMISSIC	ON TO INSTALL GAS SUPPLY					
I/We, (Name in full)						
long the landlord of the above-named Consumer in respect of the above mentioned premises neither have nor shall have any objection whatsoever to any gas piping, fittings, appliances or accessories being, from time to time, fixed in or concred from the said premises by the above-named Company nor shall I/We have any objection to further connections being provided by the said Company to other premises or persons from the outlet of the regulator installed for the perpose of supplying gas to the said premises.						
sarasni (Dated	SIGNATURE					
Truesses (ADDRESS					
:. Cignature						
N2014						
*ddrets	Telephone					

L. Sigonture

er á ét essa A la marka

Manie

Plant Characteristics generation/voltage, power factor, frequency, Automatic generation control, ramping rate, alternative fuel, time(s) required to synchronize to grid.



PLANT CHARACTERISTICS

Name of	Generation	Power	Frequency	Automatic	Alternate	Ramping
Unit	Voltage	Factor		Generation	fuel	Rate up &
				Control		Down
Jenbacher -1	400-231 Volt	1	50HZ	Yes	No	UP.1050 KW
320-1058						Down. 50
κw						κw
Jenbacher -2	400-231 Volt	1	50HZ	Yes	No	UP.1050 KW
320-1064						Down. 50
КW						κw
Waukesha	416-240	1	50 HZ	Yes	No	Up. 880 KW
LT5794 900						Down. 50
KW						κw
	I					· · · · · · · · · · · · · · · · · · ·
						Dawner
						Oleen
						1

Supply Voltage (11 kv/132kv) in case of 132 kv voltage distance and name of nearest grid(Single Line Diagram). 157

tar Textile Mills Limited



Supply rate of this project within the limits of:

- i) 416-240 V
- ii) 400-231 V

Provision of metering, instrumentatio n protection and control arrangements.

tar Textile Mills Limited

Provision of metering.

Provision of metering, instrumentation protection and control arrangements.

Exempo Cool Chain Energy Meter = socome (DIRISAO) Cold storage Breaker=Compact (NS1000N)

With all safeties protection. As over current, over voltage, under voltage, earthling rely, phase to phase

Protection.

Maderich .



A. DESIGNED EFFICIENCY OF THE PLANT

Plant output capacity : 1058 + 1064 + 900 = 3022 KW Energy inputs : 2607 + 2661 + 2640 = 7908 KW (thermal) Specific fuel consumption-Heat rate = 7908/3022 = 2.61 KWH/KWHE Electrical Efficiency = 1/ 2.61 = 38.3%

B. SITE EFFICIENCIES—based on data of January-2017

GROSS:

Gross Energy produced : 751608 KWH Power output : 751608/720 = 1044 KW Two gen set running each at = 522 KW Gas consumed during the month = 233505 cubic meter Gas consumption in SCF = 233505 x 35.4939 = 8.288 MCF per month =11511 SCF /Hr Gas consumed in BTU = 11511 x 1034.45/ 1.11 = 10727526 Btu/Hr = 3073.87 KW Specific fuel consumption – heat rate = 3073.87/1044 = 2.94 HWH/KWHE Electrical Efficiency : 1/ 2.94 = 34%

C. NET :



Gross Energy produced in the month : 751608 KWH Plant parasitic load = 200 KW (based on two running gen sets) In-house energy consumed : 200 x 720 = 144000 KWH Net energy produced in the month : 751608 – 144000 =607608 KWH Net power output = 844 KW Gas consumed per Hr = = 3073.87 KW Specific fuel consumption = 3073.87/844 = 3.64 KWH/KWHE Electrical efficiency = 1/ 3.64 = 27.5%

Copy of Agreement of DESCO and BPC. As per ANNEXURE SCHEDULE-I [See Regulation 2 (1) (xix)]

547070



POWER PURCHASE AGREEMENT

This POWER PURCHASE AGREEMENT (hereinafter referred as "PPA") is made this day of 03 - 04 - 2013 amongst and entered in to effective as and when License of "Power Producer will be granted to Part 1 by NEPRA in Pursuance of Notification (SRO 549 dated: 13.6.2016

Part 1st

BREOS:

TAMP VENDOR'S'SIGNATURE his Stamp paper is not while for Divorce and Pres Will

> Star Textile Mills Limited. ,A Company registered vide NO CUIN-0000540 under the Companies Act VII 1913 with its registered office at, A-41 Fakharuddin Valika Road S.I.T.E Karachi (Hereinafter referred to as" Part 1st" "Power Producer" which expression shall unless repugnant to the context or meaning thereof, include its successors and assignees). Through Authorized Person Mr. Mohammed Hanif Director & Company Secretary Star Textile Mules Limited.

Part 2nd

Eximpo Cool Chains (Pvt.Ltd.)

A-41 Fakharuddin Valika Road S.I.T.E Karachi incorporated under the Companies ordinance 1984 and hereinafter referred to as "Part 2nd" Purchaser/Consumer (BPC). Which expression shall unless repugnant to the context or meaning thereof, include its successors and assignees). Through Authorized Person Mr. Kalimuliah Director Eximpo Cool Chains (Pvt.) Ltd.

"Part 1st is extending its business towards power producer for supply of electricity to, BPC, area of supply will be mentioned in its license and having its Power Generation system at A-41 Fakharuddin Valika Road S.I.T.E Karachi". As a Power Producer, having excess capacity of Power generation from its consumption of its own field i-e textile sector and in position to sale available excess Power to Part II as per NEPRA Regulations & policy given in SPO, referred above often generating a license of Power Broducer for which Port 1st in

given in SRO referred above after granting a license of Power Producer for which Part 1st is applying to NEPRA

Whereas Part IInd (BPC) is running a business/factory in the same premises and short of electricity and want to purchase electricity from Part 1st as per Industrial tariff approved and enforced for 'K' Electric by the NEPRA

THIS AGREEMENT is between Part 1st "Power Producer", applying for grant of respective License, AND Part IInd Purchaser/Consumer (BPC) will be effective on the dated of issuance of I.P.P. License by the NEPRA.

Power Producer Generation facilities.

Producer's generation facility is described as:

Waukesha 900 KWx1 LT5794 Extended Series

Model :	VHP5904 LTD ESM
Weight	16800 kRPM=1000
Voltage	416-240
Year of	2008
Manufacturing:	
KW	900
KVA	1125
Ampere	1565A
1	

USA

Make: Power Factor=0.8PF

Frequency 50 HZ

Operating hours :33,322 hours Remaining hours: 66677 hours

Start up 6th May 2009 Date: Maximum Site 475m Altitude




Page (3)

(1)		
Jenbacher (NO.1)	JGS 320-1058 KW	
Model :	JGS 3201 GS-NL	
Sr. No	1082287	
Manufacture Date	2013	
Weight	11400 KG	
Voltage	400/231V	
Power Factor	1	
KW	1058	
KVA	1330	
Ampere	1536A	
Make:	Austria Europe)	
Maximum	30C	
Ambient Temp.		UNAD YAQ
Frequency	50 HZ	
Operating hours	20556 hours	Distt. Edis Distt. Edis Karachi-Pakistan
Remaining hours:	79443hours	CATE & NOTAT
Start	August 2013	
up		June .
Date:		Contraction of the second s
Maximum Site	500m	
Altitude		

Page (4)

(2)

GS 320-1064
(W(Prime)
GS 320 GS.Nl
1529882
006
1000 KG
00/231V
064
330
536A
steria Europe)
0C //2
0 H7
0 HZ
<i>j</i>
5680 hours
4319 hours
lugust 2006
00m



Page (5)

Fuel or Energy Source: GAS

NOW, THEREFORE, Part I & Part II agree as follows: DEFINITIONS

In this Agreement, unless the context requires otherwise, the following terms shall have the meaning hereinafter as assigned to them:

1.0 "NEPRA" means National Electric Power Regulatory Contribution Authority 1.1 "Billing Month" means the month in which Power is consumed.

1.2 "Tariff" means the tariff of 'K' Electric approved by NEPRA time to time

1.3. "Taxes" taxes mean every tax imposed by Federal Government as well as Provincial Government, local Government for industrial connections.

1.4 "Supply" means Power supply from Part Ist to Part Ind.

1.5 Connection "means" a power connection from power producer at point of delivery.

1.6 Meter "means" a digital meter for unit reading.

1.7 Switch Board "means" An Electric Switch Board Placed at Starting supply point along with meter in the premises of Part IInd.

1.8"Commissioned" means the act of successful Commissioning of Electric instruments required for smooth running of Power producing units

1.9 "Clearances" means any consent, license, approval, permit, or other authorization of what so ever nature which is required to be obtained by the Part Ist from any competent 1+7

Page (6) authority for the coming into force the PPA, maintenance of the power plant, for the use of the power plant to produce/delivery of electricity to Part IInd

1.10"Dispute" means any difference, disagreement, failure to perform or deliver, failure to resolve any contentious issue of whatsoever nature and howsoever arising under, or in connection with or relating to this PPA. between the Parties herein shall be resolved by mutual agreement and If the matter is not resolved within 30 days or such extended period as mutually agreed upon, will be resolved by such person or persons as both parties may nominate in that behalf , before going in court of law.

1.11 "Emergency" means a condition or situation that, in the opinion of the Part 1st by failure of generation system, fair, load shedding of Gas, Or any technical hurdle in supply.

1.12"Delivered Energy" means the net electrical energy measured in terms of units.

1.13 "Interconnection Facilities" means all the facilities, to b installed and maintained by Part IInd.

1.14 "Dissolution of PPA". Means with mutual understanding'Dissolution of PPA' will be signed by both parties after settlement of accounts.

1.15 "BPC" means bulk power consumer

1.16 "PPA" means Power Purchase Agreement.

1.17 "Force Majeure Event" shall mean any event or circumstance or a combination of events or circumstances define in sub clause (xiii) of the clause 2 of the Notification /SRO 549(i)/2016, Islamabad, dated 13.6.2016.



1.18 "Tariff" means rate of sale which will be equal to "K" Electric tariff

Part Ist & IInd are agreed as under:

Part I will start supply as and when respective license will be granted by the NEPRA in pursuance of Notification (SRO 549 dated 13-06-2016 Regarding NEPRA (Wheeling of Eclectic Power) Regulation, 2016.

1. This agreement will be binding on successors of both the parties in case of transfer /change of title of any one party with same terms and conditions.

2. Before connection is established Part IInd will provide to Part 1st

(1) A wiring fitness certificate from approved "K" electric Licensee contractor.

(11) Before connection a 3 phase meter will be commissioned at delivery point by the Part IInd.

(111) After the meter all expense of installation/repair will be upon Part lind

4. Before connection, Switch Board having necessary resistance/safety equipments along with meter will be commissioned by Part IInd.

5. Before Commissioning of any Electric instruments (New or used) a permission will be obtained from, Electrical engineer in charge of Power House, of Part Ist by Part IInd

Page(8)

6. Any consent, license, approval, permit, or other authorization of what so ever nature which is required to be obtained by the Part 1st from any competent authority before the coming into force the PPA, maintenance of the power plant, for the use of the power plant to Produce/deliver y of electricity to Part IInd which is required to be obtained by the Part 1st will be sole responsibility of Part Ist.

7. Any difference, disagreement, failure to perform or deliver, failure to resolve any contentious issue of whatsoever nature and howsoever arising under, or in connection with or relating to this PPA. between the Parties herein shall be resolved by mutual agreement and If the matter is not resolved within 30 days or such extended period as mutually agreed Upon, will be resolved by such person or persons as may nominate in that behalf by both parties before going in court of law.

8.In a condition or situation that, failure of generation system , fair , load shedding of gas, or any technical hurdle in supply, Part 1st will do sufficient and quick actions to control the situation but will not responsible for any loss of Part IInd.

9. Net electrical energy will be measured in terms of units.

10. All the facilities of protection, to be installed and maintained by Part IInd in their respective jurisdiction.

11.In case both parties resolved the Dissolution of this PPA with mutual understanding a 'Dissolution of PPA' will be signed by both parties after settlement of accounts but in case of Liquidation of damages a committee comprised mutely will be decide to fixed the percentage of responsibilities.

(I) Both parties will carry all the enforce regulations /rules/procedures/instructions from time to time by the Federal Government, Regulator, Provincial, local Governments.



Page (9)

(II) Bothe parties will take notice of force majeure events as explained in definition 1.17 "Neither the Part Ist nor the Part IInd shall be considered in breach of this Contract to the extent that performance of their respective obligations (excluding payment obligations)" is prevented by an Event of Force Majeure that arises after the Effective Date.

(III) Addresses of both parties for service of notice will be as captioned in the title.

(IV) in case of any revision /amendment will be made with mutual agreement.

12. Part 1st will generate a bill, according to enforced Industrial tariff of K-Electric, by getting reading of the net East through nominee at the last day of every month and on the 1st day of next month provide to Part IInd in the same day and Part IInd will pay this bill up to 5th of every month in case of default a penalty amount will be added 2% per day.

(I) Any tempering in meter by any party will cause the dissolution of agreement, after issuance a notice, however matter can be settled by negotiation, if matter will be settled notice stands terminated.

(II) Meter testing will be once in a year by the capable laboratory at the cost of Part IInd and cost of any type of repair of meter or replacement of the meter will be Part IInd side.

13. Applicable tariff will be Enforced tariff of K-Electric for Industrial services.

14. Every tax imposed by government for industrial connections will be added in electricity bill of each month.

Page(10)

15. Difference of adjustment of full charges by the NEPRA time to time will be adjusted in coming bill.

Signature on behalf Part 1st Name:



Mr.-Mohammed Hanif CNIC No42101-1632401-5 Director & Company Secretary Star Textile Milles Limited.

Signature on behalf Part IInd Name :

Mr.Kalimullah CNIC No 42201-8507864-5 Director Eximpo Cool Chains (Pvt.) Ltd.





Signature of 1st Witness Name Amanullahlsmail CNIC No 4221-2781928-1 Signature of Ind Witness Name Amjad Abbas CNIC No.32404-6905872-9





NVIRONMENTAL MANAGEMENT STAR TEXTILE MILLS LIMITED

a approximite bases

May. 2017

inal Report



Submission to: indh Environmental Protection Agency, GoS.



Environmental Management Plan Star Textile Mills Limited

May 2017





Star Textile Mills Limited

Address: A-41 Fakhruddin Valika Road Karachi, Pakistan Email: startextile@cyber.net.pk Phone: +92-21-2561127-8-9

Consultants

Environment Consultancy & Services

223/F Block -2 P.E.C.H.S Karachi P: 021-34303165-66 F: 021-34304426

Environmental Management Plan

Date of	Person	Reason for Review	Sections	Date Next
Review	Conducting Review	(Biennial update, amendment or modification)	Affected	Review Required

Table of Contents

.

Chapter	1: IN	TRODUCTION1
1.1	Fore	eword1
1.2	Scop	be of EMP1
1.3	Star	Textile Mills Limited (STML)
1.3.	.1	Introduction1
1.3.	.2	Manufacturing Unit1
1.3.	.3	Project location
1.3.	.4	Vision, Corporate Strategy, Quality and Environment2
1.3.	.5	Accreditation
1.4	Cont	tact Person
1.4.	.1	Related to Factory
1.4.	.2	Related to EMP
1.5	Stru	cture of EMP3
Chapter	2: IN	DUSTRIAL PROCESS AND FACILITIES DESCRIPTION
2.1	Intro	oduction5
2.2	Text	ile Manufacturing5
2.2	.1	Receiving of Raw Material5
2.2	.2	Spinning5
2.2	.3	General Inspection
2.2	.4	Cutting
2.2	.5	Embroidery6
2.2	.6	Stitching
2.2.	.7	Checking Inspection
2.2.	.8	Pressing
2.2	.9	Packaging7
2.2	.10	Manufacturing Capacity
2.3	Plast	tic Packing Products7
2.3	.1	Raw Material Handling7
2.3	.2	Molding
2.3.	.3	Inspection and Packing
2.4	Fair	Price Shop and Warehouse
2.5		9
2.6		tricity Source9
May 201	.7	i



Environmental Management Plan

-

TAR TEXTILE MILLS LIMITED

2.7	Was	te Heat Recovery System	
2.8	Was	stewater Treatment Plant	10
2.9	Utili	ties and Resources	11
Chapter	3: W	ASTE GENERATION SOURCES AND ENVIRONMENTAL MONITORING STAT	US 12
3.1	Was	ste Generation Sources	12
3.1.	1	Effluent Sources	
3.1.	2	Air Emission Sources	12
3.1.	3	Solid Waste	13
3.2	Envi	ironmental Monitoring Status	15
3.2.	1	Ambient Noise Levels	15
3.2.	2	Wastewater Quality	15
3.2.	.3	Drinking Water Quality	16
3.2.	4	Exhaust Emissions	16
3.2.	.5	Waste Management and Disposal	
Chapter	4 SAI	FETY MEASURES	
4.1	Stat	us of Safety Measures	
4.1.	.1	House Keeping Situation at STML	
4.1.	.2	Safety Signage & Awareness	
4.1.	.3	Use of Personal Protective Equipment	20
4.1.	.4	Fire Safety Arrangements	20
4.1.	.5	Fire Evacuation Plan	21
4.1.	.6	Smoking	
4.1.	.7	First Aid	22
Chapter	5: EN	NVIRONMENTAL LEGAL REQUIREMENTS	23
5.1	Intro	oduction	23
5.2	Envi	ironmental Policies and Guidelines	23
5.2.	.1	National Conservation Strategy	23
5.2.	.2	National Environmental Policy	24
5.2.	.3	Environmental Institutional Framework	24
5.3	Envi	ironmental Legislation	24
5.3.		Sindh Environmental Protection Act 2014	
5.4	Prov	vincial Rules, Regulation and Standards	
5.4.		SEPA Review of EIA/ IEE Regulation 2014	
5.4		Other Provincial Regulations/Rules	
5.1	-		

May 2017

ii

TAR TEXTILE MILLS LIMITED

Environmental	Management Plan
---------------	-----------------

-

ľ

			_
	5.5	Sindh Environmental Quality Standards (SEQS)	26
	5.5.	1 Self-Monitoring and Reporting at STML	26
Cl	hapter	6: ENVIRONMENTAL MANAGEMENT PLAN	28
	6.1	Introduction	28
	6.2	Aim of EMP	28
	6.3	Scope of EMP	28
	6.4	Role & Responsibilities	28
	6.5	Environmental Monitoring System	29
	6.6	Environmental Monitoring Plan	30
	6.6.	1 Description of Self-Monitoring Requirement for STML	30
	6.6.	2 Monitoring Plan for Effluent	32
	6.6.	3 Monitoring Plan for Air Emission	32
	6.6.	4 Monitoring Plan Ambient Air Quality	33
	6.6.	5 Monitoring Plan for Ambient and Occupational Noise Level	33
	6.6.	6 Monitoring Plan for Drinking Water Quality	34
	6.6.	7 Solid Waste Management Plan	34
	6.6.	8 Summary of Environmental Monitoring Plan	35
	Annex	ure	37
	Annex	ure-1: Layout Plan of STML	38
	Annex	ure-2: Certificate of SECP	39
	Annex	ure-3: Generator Fitness Certificate	40
	Annex	ure-4: Latest Paid Bills	43
	Annex	ure-5: Ambient Noise Level Monitoring Report	46
	Annex	ure-6: Wastewater Quality Monitoring Reports	47
	Annex	ure-7: Drinking water Quality Monitoring Reports	48
	Annex	ure-8: Boiler Stack Monitoring Report	49
	Annex	ure-9: Generator Stack Monitoring Report	50
	Annex	ure-10: Spinning Exhaust Dust Emission Report	51
	Annex	ure-11: Copies of Certificates from Civil Defense	52
	Annex	ure-12: Sindh Environmental Protection Act 2014	56
	Annex	ure 13-A: SEQS for Municipal and Industrial Effluent	86
	Annex	ure 13-B: SEQS for Industrial Gaseous Emissions, Motor Vehicle Exhaust, Noise, Drinkir	ng
	Water	Quality and Ambient Air Quality	88
	Annex	ure 13-C: SEQS for Ambient Noise Level	99

May 2017



List of Pictures

-

-

I

Picture 1-2: Housekeeping in Factory and Assembly Area	19
Picture 3-4: Safety Awareness Signage's at STML	19
Picture 5-6: Safety Awareness Signage's at STML	20
Picture 7-8: PPE's Usage Safety Awareness Signage's	20
Picture 9-10: Firefighting equipments at STML	21
Picture 11: No Smoking Signage's at STML	21
Picture 12: First Aid Box at STML	22

List of Figures

Figure 1: Location of Star Textile Mills Limited	2
Figure 2: Process Flow Chart of Textile Section	7
Figure 3: Process Flow Chart of Plastic Packing Material Section	8



List of Tables

•

--

Table 1: Details of Packing Material Type and Sizes
Table 2: Details of Primary Generators 10
Table 3: Monthly consumption of Utilities and Resources at STML11
Table 4: Details of Waste Generation Sources13
Table 5: Results of ambient Noise Level at STML
Table 6: Wastewater Quality Results16
Table 7: Details of Drinking Water Quality Parameters16
Table 8: Stack Exhaust Emissions Results of Boiler17
Table 9: Stack Exhausts Emissions Results of Generators17
Table 10: Dust Emissions of Spinning Exhaust 18
Table 11: Key Responsibilities of A&C Division
Table 12: Environmental Plan Monitoring Plan for Effluent 32
Table 13: Environmental Monitoring Plan for Gaseous Emissions
Table 14: Monitoring Plan Ambient Air Quality 33
Table 15: Ambient and Occupational Noise Monitoring Plan 33
Table 16: Drinking Water Quality Monitoring Plan 34
Table 17: Solid Waste Management
Table 18: Summary of Environmental Management Plan



Acronyms

.

--

EA	Environmental Assessment
EQS	Environmental Quality Standards
IEE	Initial Environmental Examination
NCS	National Conservation Strategy
NEP	National Environment Policy
PM	Particulate Matters
SEPA	Sindh Environmental Protection Agency
S-EPA	Sindh Environmental Protection Act
SEQS	Sindh Environmental Quality Standards
SITE	Sindh Industrial Trading Estate
STML	Star Textile Mills Limited
SPM	Suspended Particulates Matter

Chapter 1: INTRODUCTION

1.1 Foreword

The environmental management plan (EMP) of M/s Star Textile Mills Limited (STML) has been prepared to comply with the legislative requirement under the Sindh Environmental Protection Act, 2014 Section (20) and Rules and Regulations made there under. The methodology of work is based on the directions mentioned under 'Self-Monitoring and Reporting by Industries Rules' with the prime objective to comply with the Sindh Environmental Quality Standards (SEQS).

The Environmental Management Plan (EMP) has been developed to identify and recognize all legal requirements and to provide an action plan for implementation of the same. During preparation of the EMP a rapid environmental assessment and waste audit of industrial operations was carried out. The ongoing physical operations in the process of spinning, stitching and packing of finish products and in the manufacturing of disposal glasses and food boxes of plastic and aluminum were reviewed and areas of concern having environmental significance were evaluated and addressed accordingly in EMP.

1.2 Scope of EMP

This EMP has been developed in accordance with the directions of EPA Sindh regarding implementation of Self-Monitoring Program ensuring compliance with the Sindh Environmental Quality Standards (SEQS). EMP includes an environmental monitoring plan and a waste management plan; this EMP has been focused and applicable on facility of M/S STML located in S.I.T.E., Karachi.

1.3 Star Textile Mills Limited (STML)

1.3.1 Introduction

Star Textile Mills Limited started production in 1952 producing finest quality polyester, fibre and blended yarn for domestic and international markets.

1.3.2 Manufacturing Unit

The unit is installed for manufacturing textile products from raw fabric and to manufacture the disposable food usage materials (such as spoon, food box and glass) by using the plastic (polypropylene) and aluminum.



110%

1

Environmental Management Plan Chapter-1: Introduction



The textile manufacturing product has various facilities including spinning, stitching and packing. The entire textile process is dry and no wet process is used at STML. In addition to this, there is another portion where disposal products such as box, glasses and spoon are also manufactured by amalgamation of plastic and aluminum, and also a small portion of warehouse is dedicated for general store material for the mart shop. The auxiliary facilities include power generators, waste heat recovery system, labor accommodation, etc.

1.3.3 Project location

STML Manufacturing Facility is located at A-41 Fakhruddin Valika Road, Karachi, Pakistan. Pakistan, The location map of Star Textile Mills Limited (STML) is shown in Figure 01 and Layout plan of the Factory is attached as Annexure-1.



Figure 1: Location of Star Textile Mills Limited

1.3.4 Vision, Corporate Strategy, Quality and Environment

A. Vision

Continue to strive for higher standard of quality to regain the reputation earned during last fifty years from the society, as leader and trend setter in Textile products.

B. Corporate Strategy

Through Optimum utilization of available resources, make the Company viable and profitable, so as to generate adequate profit to make reasonable returns on shareholders equity and plough back for implementing essentially required BMR programme as quickly as possible to produce quality products at competitive prices.



2

TAR TEXTILE MILLS LIMITED

C. Duty towards Environment

STML strictly believe that our planet is our home and we are doing our best efforts to make sure that our home remains clean and pollution free. At star Textile Mills, the management is well aware of this global hazard and has taken substantial initiatives for the preservation of the environment.

1.3.5 Accreditation

STML is registered with Pakistan Security Exchange Commission of Pakistan and Karachi. Copy of the certificate is attached as Annexure 2 for references.

1.4 Contact Person

1.4.1 Related to Factory

Contact details and mailing address for STML is mentioned below.

Contact Person:	Muhammad Hanif
Designation:	Director
Telephone No.:	021-2561127-8-9
Email:	stattextile@cyber.net.pk
Website:	http://www.star-tex.com

1.4.2 Related to EMP

Contact details and mailing address for STML is mentioned below

Contact Person:	Mian Muhammad Zahid
Designation:	General Manager, Admin & Compliance
Telephone No.:	021- 2561127-8-9
Email:	mianzahid@star-tex.com
Website:	http://www.star-tex.com

1.5 Structure of EMP

This EMP consists of Six Chapters as briefly describe below:

Chapter-1 Briefly describes the STML, its vision, operation, need and scope of the EMP, and structure of the EMP document.



Chapter-2 Describes the industrial process/operation being performed at the STML. Details of the utilities being consumed at STML during operations

Chapter-3 Identifies the sources of pollution with respect to air emissions, liquid effluent and solid waste and environmental monitoring and compliance status.

Chapter-4 Describes the different safety measures taken by STML to protect the Health and safety of the employees working at STML.

Chapter-5 Describes the legislative requirements that are applicable to STML for the compliance of self-monitoring has been clearly identified.

Chapter-6 Describes the environmental management plans with respect to the air emissions and effluents being generated during the manufacturing processes at STML. It includes the environmental monitoring plan and waste management plan and also summarized monitoring plan.



TAR TEXTILE MILLS LIMITED

2.

Chapter 2: INDUSTRIAL PROCESS AND FACILITIES DESCRIPTION

2.1 Introduction

M/S STML is a manufacturing facility of two different categories of products which shelters textile and disposal packing material. The ongoing business model is to provide quality assured manufactured products to their customers in the textile and other sectors. The products are manufactured based on the market requirement. The two main dry processes being used at the STML which includes textile products and packing products.

2.2 Textile Manufacturing

The major section is the textile product manufacturing unit. The process involves receiving of yarn, ready-made fabric, cutting, checking, stitching, general checking, pressing, packing, storage and dispatch. The process flow chart of the textile section is given in Figure-2.

2.2.1 Receiving of Raw Material

The major raw material for the textile sector at the STML is of two kinds including yarn for the spinning section and ready-made fabric for the garments section. The raw material is acquired through local market and is stored in their dedicated storage areas and is issued to either garments section or spinning section as per the production demand. The fibre is procured for the spinning purpose. The facility is equipped with state of the art spinning facility.

2.2.2 Spinning

In this section, the raw material (fibre) is supplied from the raw material storage area. The spinning is the first process at the STML. In this process, fibre is undergoing in the process to convert in to yarn. The fibres are received in compressed bales. The received fibres are clean to remove dust from the fibres. After the cleaning, the operation are conveyed by air steam and fed into the carding machines. The carding machines convert it into thin ropes known as carded fibres.

After the carding section, the carded fibres are passed to combing section where these become finer, cleaner and more aligned and then it passes to the drawing section where the several silvers are combines and fed into the drawing machine and form different types of fibres blend.



5

Environmental Management Plan Chapter-2: Industrial Process & Facility Description



The next stage is drafting which take place on roving frame and stretches yarn further. This stage imparts a slight twist as it removes yarn and winds into the rotating spindle and then raving produced in the drafting step are mounted on to the spinning frame where they are setup to produce yard. This process generates the dust emissions; those are collected and controlled by the dust emission control system. The STML is equipped with the state of the art cotton dust collection and control system.

2.2.3 General Inspection

In this section, general inspection of received raw material is performed to control the quality by examining the fabric material and other desired specifications. In this section, ready-made fabric is checked, and rejected if not found as per the standards. No waste is generated in this section.

2.2.4 Cutting

After the general inspection, the fabric is transferred to the cutting section. In this section, fabric is cut out in the pattern pieces as per desired dimension. In this section process, only the small piece of fabric wastes is being generated.

2.2.5 Embroidery

This process is carried out by the help of sewing machines which is used to create pattern. This process is dry in nature and generates the threads and small pieces of fabric which recyclable in nature.

2.2.6 Stitching

Stitching is a completely dry process, and only generates solid waste, mainly fabric waste; thread waste, empty thread pipes, etc.

2.2.7 Checking Inspection

In this section, final inspection is performed to control the quality by examining the product's size and other specifications. In this section, stitched fabric is checked, and rejected if not found as per the standards. No waste is generated in this section.

2.2.8 Pressing

The pressing is second last stage process, after the general inspection the ready-made fabric suits are transferred into pressing section for the final pressing. Pressing is a finishing process which is carried out by the help of heat and pressure with steam press to remove creases and to impart a flat appearance to the cloth or garments. This process generates very insignificant amount of exhaust from the steam press.



2.2.9 Packaging

After the final visual inspection, the articles are first poly-packed, then dozen-wise, and then color wise, after which they are sorted size ratio wise, then finally bundled and packed in the carton. The carton is marked with important information in printed form which is visible easily from the exterior of the carton.

TAR TEXTILE MILLS LIMITED

2.2.10 Manufacturing Capacity

STML has the manufacturing capacity of ready-made suits of having 30 Master boxes per day.



Figure 2: Process Flow Chart of Textile Section

2.3 **Plastic Packing Products**

The STML has installed robust manufacturing facility for the manufacturing of polypropylene plastic and aluminum based packing products to serve the purpose in food usage. This section provides the details of packing products, industrial activities and machinery involved in the entire manufacturing process. The plastic based products manufacturing process is very simple involving two basic stages. The process of manufacturing has briefly been described in the following sections, and the detailed process flow diagram of packing material section is given in Figure-3. 11 Lavit

2.3.1 Raw Material Handling

The two types of raw materials are received from various sources either imported or procured from the local market. These two types of basic raw materials purchased for packaging products manufacturing include plastic (mainly Polypropylene Plastic i.e. PP) Environmental Management Plan Chapter-2: Industrial Process & Facility Description





and aluminum. The PP, other plastic and aluminum materials are brought in use for the manufacturing of disposable food products such as glass, food container and spoon. The necessary details of products of plastic based disposable packaging materials are provided in Table-1. The aluminum based food boxes (of small size) are also manufactured in the facility.

In this section, only packing material waste (mainly cartons and ribbons) is generated which is recyclable material.

2.3.2 Molding

The packing products manufacturing is very simple and the major step involved is the molding of raw material (plastic and aluminum) to shape the desired size of small pieces. The electric machines are used for the molding purpose. The STML is equipped with the state of the art technology molding machines. Only the packing disposable glasses are sent to the printing section before transferal to the inspection and packing section, where glasses are printed in accordance with the buyer colors requirement. The printing is also carried out through the state of the art technology machine, and additives and color shades are loaded in the machine boxes for printing.

In this section, pieces of plastic, aluminum and packing material are generated as waste (mostly recyclable).

2.3.3 Inspection and Packing

After the molding, inspection of the material is done manually by the team to examine the quality of molded products after which, the products are packed dozen-wise. After then, they are bundled and packed in the carton. The carton is marked with important information in printed form which is visible easily from the exterior of the carton.

There is no hazardous waste which is generated from this process. The details of products are given in Table-1.



Figure 3: Process Flow Chart of Plastic Packing Material Section



May 2017

Environmental Management Plan

TAR TEXTILE MILLS LIMITED



Chapter-2: Industrial Process & Facility Description

Table 1: Details of Packing Material Type and Sizes

Sr.#	Type of Packing Product	Material of Product	
1.	Disposable Glass	Plastic	
2.	Disposal Spoon	Plastic	
3.	Food Packing Container	Plastic and Aluminum	

2.4 Fair Price Shop and Warehouse

The STML has also a facility of one fair price shop of finished ready-made fabrics along with the super general store in front side of road. The fair price shop is for the public whose entrance and exist is given from the front road side. The warehouse exists within the STML's facility where only authorized handlers and material supply vehicles have access. The super store warehouse contains domestic usage general store material and no hazardous material is stored in the warehouse.

2.5 Accommodation Block

The STML's management has provided the accommodation block at the back of facility for the stay of team. The accommodation block ha rooms inside.

In this block, major solid waste is generated from canteen besides wastewater generation from canteen and washrooms.

2.6 Electricity Source

The STML facility is equipped with the three gas based generators having total capacity of 3022 KW. The generators are equipped for the self-generation of power for the facility. These gas based generators are alternate basis excluding morning shift. The all three generators are mainly operated in the morning shift. In addition to these, one diesel oil based generator is also installed at the standby source of electricity in-case of any fault or interruption. The details of generators are given already given in Table-2. Copy of fitness certificate from the Electric Inspector is attached as Annexure-3.



Environmental Management Plan

Chapter-2: Industrial Process & Facility Description



Table 2: Details of Primary Generators

Sr. #	Name of Production	Year of Make Model	Start of Operation	Capacity of Production EP	Fuel	Permission/Fitness No from Electric
	Unit	Wouer	operation	Floatetioner		Inspector Govt of
A *******						Sindh
1	Janbacher	2013	August 2013	1058 KW	Gas	1050/30 dated
	(NO 1)	Austria				11.01.2016
	JGS 320-	(Europe)				
	1058KW	JGS 320 1058				
	(prime)	KW				
2	Janbechar (NO	2006	August 2006	1064 KW	Gas	1279/3613 dated
	2) JGS 320-	Austria(Europe)				16.8.2016
	1064KW	JGS 320 1058				
	(Prime)	KW Prime				
3	Waukesha	USA VH5904	6 th May 2016	900 KW	Gas	1278/3614 dated
	LT5794	LTD ESM		1993년 1993년 - 11 1997 - 12 - 1997		16.8.2016
	Extended			날은 문화		

2.7 Waste Heat Recovery System

The STML management has installed waste heat recovery system to utilize / reuse the heat energy from stack emissions of power generators to produce steam. Waste heat is the heat which is generated through generator process by way of fuel combustion, and then dumped into the environment even though it could still be reused for some useful and economic purpose. The essential quality of heat is not the amount but rather its value. The strategy of how to recover this heat depends partly on the temperature of the waste heat gases and the economics involved.

At the STML, adequate quantity of hot flue gases is generated from primary electricity source generators. If some of this waste heat can be recovered, a considerable amount of primary fuel can be saved resulting in reduction in the emissions of greenhouse gases. The energy lost in waste gases cannot be fully recovered. However, much of the heat can be recovered and the loss can be minimized by adopting various methods.

The STML has installed waste heat recovery boiler installed at the exhausts of two primary electricity sources (gas based generators). The details of waste heat recovery boiler are given in section 2.9 of this report.

2.8 Wastewater Treatment Plant

The processes at the STML's facility are dry and thus don't require use of water in the process. The daily water consumption at the STML is approximately 20,000-25,000 gallons per day. The entire wastewater produced from the STML's facility is routed into

110

Environmental Management Plan Chapter-2: Industrial Process & Facility Description

TAR TEXTILE MILLS LIMITED



11

the sewerage network system and then diverted to the main drain line of SITE Area but after passing through the septic tank treatment.

The major fraction of wastewater composition is typical sewage wastewater whose sources include toilet, prayer area (ablution) and non-regular wash water producing from washing of toilets, office room and prayer area. The total number of employees at the STML is 300 working in two shifts (one shift of eight hours each), and the wastewater generated is of municipal sewage nature which is discharged through the sewage lines after passing through septic tank treatment. The facility has the two septic tanks at different locations within the facility including one at front factory septic tank and one at rear side comprises accommodation block of the facility. The septic tank at the front side treats the wastewater sourced by office block, and backside septic tank treats the wastewater of accommodation block and others. The detail dimensions of factory discharge septic tank and rear septic tank are 20' x 15' x 10' and 10'x 5'x 8' respectively.

Utilities and Resources 2.9

Utilities and resources at STML are fresh water, electricity and natural gas. Their supply sources and rate of consumptions details are described in Table-3.

Category/Type	Resource	Unit	Consumption
	Electricity	end 1987 - Landard Barrison 1997 - Landard Barrison 1997 - Landard Barrison	
Primary Source	Generator 1 (Gas Based)	KVA	900
	Generator 2 (Gas Based)	KVA	1058
	Generator 3 (Gas Based)	KVA	1064
Secondary Source	Generator 1 (Oil Based)	KVA	1000
	Boiler (Waste Heat Recov	/ery)	
Steam	Boiler	Tons/ day	1.5
	Natural Gas		
Source	SSGCL	MMBTU/day	330 -400
	Water Supply		
Primary Source	SITE supply	GPD ^{***}	20,000 -25,000
Total Discharge	SITE Drain Line	GPD	15,000-20,000
Copy of latest utilities p	baid bills for gas and water is atta	ached as Annexu	ire-4.
May 2017			11

Table 3: Monthly consumption of Utilities and Resources at STML



Chapter 3: WASTE GENERATION SOURCES AND ENVIRONMENTAL MONITORING STATUS

This section describes in detail the Waste generation sources, including the effluent, air emission and Solid waste sources.

3.1 Waste Generation Sources

Following are the waste generation sources at STML:

- A. Effluent / Liquid sources
- B. Air Emission sources
- C. Solid waste sources
 - 3.1.1 Effluent Sources

Following are the effluent sources at the STML manufacturing facility.

- i. Canteen
- ii. Toilets
- iii. Ablution Area
- iv. Accommodation Block
- v. Boiler blow down

The above mentioned wastewater sources are routed through a drainage network into the main drain line system of SITE. The entire discharged wastewater from the facility is first treated in the septic treatment prior to its final discharge into the main drain line. The entire wastewater is treated to meet the prescribed SEQS limits. The effluent monitoring was conducted from the factory septic treatment discharge on 08-05-2017 which has been discussed in Section 3.2.2 of this report.

3.1.2 Air Emission Sources

Following are the three sources which generate air emissions from the operations at the STML.

A. Generator

The STML has installed generator for the generation of power. The STML has installed total four (4) generators. Out of which, three (3) are natural gas based generators and waste heat recovery boiler is also installed at the exhaust of two among these

May 2017

12

(10) and



generators; whereas, the remaining one generator is diesel oil based generator which is used as secondary source of power generation.

B. Boiler

The boiler is also source of emissions generation. The STML has installed waste heat recovery boiler at the exhaust of two generators. The management has installed waste heat recovery unit to control the exhausting heat and reduce the hot gases emissions into the environment. The STML has a single boiler emissions source.

C. Spinning Exhaust

The spinning exhaust is also third source of generation of dust emissions. The STML has installed dust emissions collector and control system in the spinning section. The management has installed dust collection and control system to workplace quality and to collect the dust fibre and reduce the dust emissions in the environment.

3.1.3 Solid Waste

At STML following sources have been identified for solid waste sources. The details of section wise waste generation are shown in Table-3.

S#	Section	Type of Waste
1.	Substance Store	a. Boxes of card board
		b. Empty bottles / cans
		c. Paper bags and paper
		d. Plastics / polypropylene bags
2.	Stitching and Embroidery Department	a. Fabric cutting waste
		b. Empty thread pipes
		d. Packing material
3.	Spinning	a. Cotton Dust
		b. Cones
4.	Packing Department	a. Damaged fabric
		b. Plastic bags
		c. Packing ropes
5.	Office Block	a. Paper
		b. Cartridge
		c. Plastic

Table 4: Details of Waste Generation Sources

TAR TEXTILE MILLS LIMITED







3.2 Environmental Monitoring Status

The STML management has prepared environmental monitoring plan as performance indicators of environmental compliance. The STML has recently carried out environmental monitoring of ambient noise, wastewater and drinking water quality, and stack exhaust emissions. This section describes major environmental monitoring as per Self-Monitoring & Industrial Reporting Rules, 2014.

3.2.1 Ambient Noise Levels

The STML has carried out ambient noise level monitoring at two locations including (North and South) of the facility on dated 08-05-2017 which shows the mode results are within the permissible limits. The details of result of ambient noise are shown in Table-5 and copy of lab reports are attached as Annexure-5.

Acoustic Source Area	NEQS Limit	Unit		Noise Lev	el
			Min	Max	Avg
North	75	dB	60.8	63.2	62.6
South	75	dB	70.0	71.6	70.8

Table 5: Results of ambient Noise Level at STML

3.2.2 Wastewater Quality

The STML has carried out wastewater monitoring of the factory front septic treatment discharge through third party EPA certified laboratory for parameters mentioned in Self-Monitoring & Industrial Reporting Rules, 2014 which shows that Temperature, pH, TDS, Chromium BOD, COD, TSS and Copper comply with the SEQS permissible limits. The details of effluent quality monitoring result are shown in Table-6 and copy of lab reports are attached as Annexure-6.







Table 6: Wastewater Quality Results

Parameter	SEQS Limit	Unit	Concentration
Temperature or Temperature	40 ≤ 3	°C	29.6
increase			
pH Value (H ⁺)	6.0 - 9.0	SU	7.82
5-Days Biochemical Oxygen	250.0	mg/L	147
Demand (BOD) @ 20 °C			
Chemical Oxygen Demand	400.0	mg/L	302
(COD)			
Total Suspended Solids (TSS)	400	mg/L	319
Total Dissolved Solids (TDS)	3500	mg/L	781.0
Chromium (Cr) trivalent and	1.0	mg/L	0.0106
hexavalent			
Copper (Cu) total	1.0	mg/L	0.9172

3.2.3 Drinking Water Quality

The STML has carried out drinking water quality monitoring through third party EPA certified laboratory to comply with drinking water quality standards. All drinking water parameters (those analyzed) are complying with the SSDWQ standards. Table-7 shows the details of parameters and Lab report is attached as Annexure-7.

Table 7: Details of Drinking Water Qua	lity Parameters
--	-----------------

Parameter	SSDWQ Limit	Unit	Result
Total Coliform	0 cfu / 100 ml	cfu	ND
Fecal Coliform	0 cfu / 100 ml	cfu	ND
Escherichia Coli (E-Coli)	0 cfu / 100 ml	cfu	ND
Color	≤ 15.0	TCU	BDL
Turbidity	< 5.0	NTU	0.29
Total Hardness as CaCO ₃	< 500.0	mg/L	54.0
Total Dissolved Solids (TDS)	< 1000.0	mg/L	165.0
pH Value	6.5 - 8.5	SU	7.35

3.2.4 Exhaust Emissions

The STML has three types of exhaust emission sources, those are described below:

A. Boiler Stack Emissions

The STML has one boiler stack emissions source (Waste Heat Recovery). The STML management has carried out monitoring of stack exhaust emissions for the boiler which



16



is regularly operated in normal condition. The exhaust emission monitoring was carried out through third party EPA certified laboratory on 08-05-2017. The report results reveal that the exhaust emissions priority parameters of the boiler are completely complying with the SEQS standards. The details of monitoring result are given Table-8 and copy of report is attached as Annexure-8.

Table 8: Stack Exhaust Emissions Results of Boiler	Table 8: Sta	ack Exhaust	Emissions	Results	of Boiler
--	--------------	-------------	-----------	---------	-----------

Parameter	SEQS	Unit	Concentration
	Limit		Result
CO de la construcción de la constru	800.0	mg/Nm ³	221.7
NOx	400.0	mg/Nm ³	198.5
Flue Gases Temperature	NoGL	°C	253.6

B. Generators

The STML management has carried out monitoring of stack exhaust emissions for the one generator the other diesel oil based (standby) was under maintenance during the environmental monitoring activity. The exhaust emission monitoring was carried out through third party EPA certified laboratory on 08-05-2017. The report results reveal that the exhaust emissions priority parameters of the generator are completely complying with the SEQS standards. The details of monitoring result are given Table-9 and copy of report is attached as Annexure-9.

Parameter	SEQS	Unit	Generator
	Limit		Classification
			Natural
			Gas
			Operated
			Generator
CO	800.0	mg∕Nm³	531.6
NOx	400.0	mg/Nm ³	194.8
Flue Gases	NoGL	°C	395.7
Temperature			

VILAnot

TAR TEXTILE MILLS LIMITED

C. Spinning Exhaust

The STML has main dust exhaust emissions source from the spinning section. The STML management has carried out monitoring of dust emissions for the spinning exhaust. The dust exhaust emission monitoring was carried out through third party EPA certified laboratory on 08-05-2017. The report results reveal that the dust emissions from the spinning exhaust are complying with the SEQS standards in context with SPM, PM_{2.5}; whereas, PM₁₀ is showing slight increment by the prescribed limit of SEQS. The details of monitoring result are given Table-10 and copy of report is attached as Annexure-10.

Parameter	SEQS	Unit	Concentration
	Limit		Result
SPM	500.0	ug/Nm ³	221.7
PM ₁₀	150.0	ug/Nm ³	198.5
PM2.5	75	ug/Nm ³	BDL

Table 10: Dust Emissions of Spinning Exhaust

3.2.5 Waste Management and Disposal

The STML has three major types of wastes, which are hazardous, clinical infectious and non-hazardous waste. Hazardous and infectious wastes will be disposed-off through third party contractor; Hazardous waste & Infectious waste disposal quantities will be recorded and disposal certificates from contractors will be obtained and non-hazardous waste is disposed at Landfill site through local waste management authority.



Chapter 4 SAFETY MEASURES

Star Textile Mills Limited has well established Safety, Health and Environment system; company has also in place Quality Management System for quality control.

4.1 Status of Safety Measures

4.1.1 House Keeping Situation at STML

Overall the plant gives a clean picture. Garbage and litters are dumped in the dustbins, available at different locations in the factory. Pictures 1-2 show the housekeeping of factory and assembly area at STML.



Picture 1-2: Housekeeping in Factory and Assembly Area

4.1.2 Safety Signage & Awareness

Posters, signs and education material regarding safety habits, safety culture and safety tips are available at all the prominent places in the STML facility. It helps in educating the employees regarding the importance of safety and minimizing the chances of accidents. Pictures 3-6 show the safety awareness signage at STML.



Picture 3-4: Safety Awareness Signage's at STML


Picture 5-6: Safety Awareness Signage's at STML

4.1.3 Use of Personal Protective Equipment

Personal protective equipment like gloves, safety shoes, and mask are generally used in the factory area. Regarding entrance in to process area related PPEs has been provided for safety purpose and Safety shower together with eye washing facility are also available in case of any exposure to chemicals. Pictures 7-8 show the usage of PPE's Awareness Signages at STML.



Picture 7-8: PPE's Usage Safety Awareness Signage's

4.1.4 Fire Safety Arrangements

STML is equipped with necessary firefighting system, which includes fire hydrants, fire extinguish trolley and fire extinguishers. Fire alarm system is also installed in the process unit area. A selected group of team is trained in firefighting and trainings have been provided to all the employees. Pictures 9-10 show the firefighting equipment at STML. In addition to these, firefighting trainings are also provided through Civil Defense. Copies of training certificates are attached as Annexure-11.

20

TAR TEXTILE MILLS LIMITED







4.1.5 Fire Evacuation Plan

There is a proper designed evacuation plan. Evacuation exits are properly indicated and kept clear from any hindrances, Fire and safety team is designated to handle any such emergency like a fire hazard, bomb threat or any emergency other situation. Meeting point in the factory during evacuation is designated. A proper system for headcounts during emergency is also being maintained through administration team.

4.1.6 Smoking

At STML smoking is strictly prohibited in the process area of the facility, furthermore dedicated smoking areas have been hoisted for the employees as indicator. Picture 11 shows the no smoking Signages.



Picture 11: No Smoking Signage's at STML





4.1.7 First Aid

STML has made also arrangement of first aid kit at the factory. In case of emergency, First aid boxes are available to deal with any smaller medical emergency. Picture-12 shows the first aid box available at STML.



Picture 12: First Aid Box at STML



Chapter 5: Environmental legal requirements

5.1 Introduction

The principal environmental regulatory agency in Pakistan was the Environmental Protection Agency (EPA) of Pakistan that formulates environmental policies, action plans and legislation. After the 18th amendment the environmental portfolio devolved to provincial governments. Consequently, the Sindh Environmental Protection Agency was empowered to formulate environmental legislation, rules, regulations and standards and their enforcement/implement in the whole Sindh provinces as a formulating, regulatory and monitoring agencies. EPA Sindh head office is located at ST-2/1, Sector-23, Korangi Industrial Area, Karachi.

Presently, the basic legislation on environment is the Sindh Environmental Protection Act of 2014 (SEPA 2014). EPA Sindh Review of IEE/EIA Regulations 2014, Sindh Environmental Quality Standards 2015 (SEQS 2015) and other rules and regulation have been notified by the Government of Sindh. EPA Sindh has also issued directions through print media and direct communications to the concerned parties for immediate compliance with the legislation and Rules and Regulations promulgated so far.

This section provides synopsis of policies, legislation, and guidelines that may have relevance to the activities carried out by M/s Star Textile Mills Limited within the scope defined for this EMP. The relevant requirements of the policy documents and legislative framework have also been incorporated in the environmental management and monitoring plan being formulated for the better environmental impacts management. STML management is committed to follow and comply with the relevant requirements of the policy documents and legislative frame work for the better management of environmental aspects and impacts of their business-related activities

5.2 Environmental Policies and Guidelines

5.2.1 National Conservation Strategy

The National Conservation Strategy (NCS) is the primary policy document of the Government of Pakistan (GoP) on national environmental issues. The document was approved by the Federal Cabinet in March 1992. The NCS identifies 14 core areas and recommends immediate attention to the stated core areas in order to preserve the country's environment.

The main objectives of the strategy are conservation of natural resources, sustainable development and improved efficiency in the use and management of resources. It covers fourteen key priority areas for policy formulation and intervention, including protecting



23

Environmental Management Plan Chapter-5: Environmental Legal Requirements



watersheds; supporting forestry and plantations; protecting water bodies and sustaining fisheries; conserving biodiversity; increasing energy efficiency; developing and deploying renewable resources; preventing or decreasing pollution; managing urban wastes; and preserving the cultural heritage. Energy policies include promoting efficiency and conservation as well as co-generation, hydro, biogas, solar and new alternatives. The strategy also includes measures to control and limit pollution - for example, by proper management of urban waste material, recycling programs, safe disposal practices.

5.2.2 National Environmental Policy

National Environmental Policy has been approved by the Federal Cabinet in 2005. The policy covers all sectors and a wide range of means for promoting conservation and environmental protection in water, air and waste management, forestry, and transport. The policy aims to promote the protection of the environment, the honoring of international obligations, sustainable management of resources, and economic growth.

5.2.3 Environmental Institutional Framework

Post 18th Amendment to the Constitution of Pakistan, the provincial Environmental Protection Agencies are fully empowered to initiate, modify and enforce environmental legislation in their respective provinces. In the province of Sindh, the EPA is the prime regulatory and monitoring institute. EPA is headed by a Director General who is the lead responsible person for enforcement of environmental legislation. He is also responsible for the guidance of other provincial departments/institutes on environmental matters and related issues. DG EPA Sindh functions from his registered head office located at Karachi, however, has regional offices in other major cities of the province functioning under senior officers.

EPA Sindh is attached with Environmental Climate Change and Coastal (ECCCD) Department of Government of Sindh. The ECCCD, headed by a Secretary, is the administrative body and responsible for coordination with other line departments and agencies of the province. It also performs coordination and communication with other provinces and federal government agencies.

5.3 Environmental Legislation

5.3.1 Sindh Environmental Protection Act 2014

The Sindh Environmental Protection Act was notified by the Provincial Assembly of Sindh via notification #PAS/Legis-B-06/2014 dated March 20, 2014. The Act extends to whole of the province of Sindh and is to provide for the protection, conservation, rehabilitation and improvement of the environment, for the prevention and control of pollution, and promotion of sustainable development.

May 2017

24

Environmental Management Plan Chapter-5: Environmental Legal Requirements



Under Section 2(xxxl), the Act defines "pollution" as the contamination of air, land or water by the discharge or emission of effluent or wastes or air pollutants or noise or other matter which either directly or indirectly or in combination with other discharges or substances alters unfavorably the chemical, physical, biological, radiational, thermal or radiological or aesthetic properties of the air, land or water or which may, or is likely to make the air, land or water unclean, noxious or impure or injurious, disagreeable or detrimental to the health, safety, welfare or property of persons or harmful to biodiversity.

The Act, under Section 20, empowers the EPA Sindh to acquire from the proponent an EMP of any project or activity to acquire comprehensive appraisal of the environmental aspects of that project or activity. Section 17 of the Act requires an environmental impact assessment document from the proponent of any project prior to commencement of any construction or operations activity.

SEPA Act 2014 is attached as Annexure-12 for ready reference and further guidance.

5.4 Provincial Rules, Regulation and Standards

5.4.1 SEPA Review of EIA/ IEE Regulation 2014

In exercise of the powers conferred by Section 37 of the Sindh Environmental Protection Act, 2014, the Sindh Environmental Protection Agency, with the approval of Government of Sindh has notified the 'Sindh Environmental Protection Agency (Review of Initial Environmental Examination and Environmental Impact Assessment) Regulations, 2014' vide notification No. EPA/TECH/739/2014 dated 16th December 2014

This regulation describes the procedure for conducting environmental assessments and their approvals process. Categories for projects requiring IEE, EIA or Environmental Checklists is mentioned in the regulation. The environmental assessment includes preparation of an Environmental Management Plan (EMP).

5.4.2 Other Provincial Regulations/Rules

In exercise of the powers conferred by Section 36 read with Section 26 of the Sindh Environmental Protection Act, 2014, the Sindh Environmental Protection Agency, with the approval of the Government of Sindh, has notified following Rules and Regulations in December 2014:

• Sindh Environmental Protection Tribunal Rules, 2014: It provides a complete process for functioning of the Environmental Tribunals, which are responsible for prosecution of environmental related matters and legal cases initiated by the EPA Sindh.

- Sindh Environmental Protection (Composition of Offences and Payment of Administrative Penalty) Rules 2014: Describes the process for compounding offences or complaints under Section 22(6) of the Act. The Rules describes the format that should be used for filling an Application to the DG SEPA by the accused; format for the Affidavit by the accused; and format for administrative penalty notices.
- Sindh Environmental Quality Standards (Self-Monitoring and Reporting by Industry) Rules, 2014: This describes the process to be adopted by every industry for compliance with the Environmental Quality Standards. It includes the categorizing of industrial unit for identification of the reporting parameters and frequency of reports submission to SEPA.

5.5 Sindh Environmental Quality Standards (SEQS)

SEQS is an important and prime legislation in Sindh targeted for control of pollution. Government of Sindh In exercise of the powers conferred under clause (g) of sub-section (1) of section of 6 of the Sindh Environmental Protection Act, 2014, the Sindh Environmental Protection Agency, with the approval of the Sindh Environmental Protection Council, has established following standards;

- SEQS which were approved by the Sindh Environment Protection Council in 2016. These SEQS for Municipal and Industrial effluent are effective and attached as Annexure 13-A.
- SEQS which were approved by the Sindh Environment Protection Council in 2016. These SEQS for Industrial Gaseous Emissions, Motor Vehicle Exhaust, Noise, Ambient Air Quality, Drinking Water Quality are effective and attached as Annexure 13-B.
- SEQS which were approved by the Sindh Environment Protection Council in 2016. These SEQS for Ambient Noise Level are effective and attached as Annexure 13-C.

5.5.1 Self-Monitoring and Reporting at STML

The STML being an Textile (garments) and (plastic molding) entity, has been recommended by the team of consultant under Category C with respect to the effluent discharges requiring bi-annually monitoring and Category B with respect to the emissions from gas fired boiler and generator requiring quarterly monitoring.

The Priority Parameters for monitoring of effluent under Normal Plant Conditions includes pH, TSS, TDS, BOD, COD and Oil and Grease.

Environmental Management Plan Chapter-5: Environmental Legal Requirements



The priority parameters for monitoring of gas based boiler and generator emissions under Normal Plant Conditions are CO and NOx.

The priority parameters for monitoring of oil based (standby) generators emissions under Normal Plant Conditions are CO, PM, SOx and NOx.

The monitoring and reporting requirements for liquid effluents for normal plant conditions are on a biannually basis, whereas for startup and upset conditions monitoring is required on hourly basis. The monitoring and reporting requirements for gaseous emissions from gas based fired equipment are on quarterly basis, whereas the oil based fired equipment generator (standby) on quarterly basis. Monitoring and reporting of metal analysis in all gaseous emissions is required every two years (only where fuel contains hydrogen sulfide H₂S more than 20ppm.



Chapter 6: Environmental management plan

6.1 Introduction

Environmental management is essential for ensuring that all operations at an industrial unit are planned and executed without imperiling the environment and human health and is fully compliant to the legal environmental requirements. The Environmental Management Plan (EMP) is developed to manage land, air and water pollution risks associated with a business. Development of an EMP is a legal requirement for industrial businesses in Sindh. An EMP is basically a **'Pollution Prevention Plan'** of a process, as the main focus is preventing pollution. An industry, having EMP has an advantage of knowing the legal requirements and managing pollution risks according to best practices. EMPs help businesses increase efficiencies, by minimizing risks, and reduce costs, by avoiding accidents and penalties.

6.2 Aim of EMP

The aim of this EMP is to assist STML in the systematic and prompt recognition of their environmental problems and the effective actions to correct them. Ultimately, good environmental performance is achieved. Good understanding of environmental priorities and policies, proper management of the facility, knowledge of regulatory requirements and keeping up-to-date operational information are basic to good environmental performance.

6.3 Scope of EMP

This EMP describes the procedure for compliance with the legal requirements identified in SEQS, SEPA'2014, and Rules and Regulations made there under concerning monitoring and management of waste streams. Roles and responsibilities of all concerned personnel and entities for implementation of EMP are also highlighted. Format for recording and reporting data are also mentioned categorically.

6.4 Role & Responsibilities

The Administration division is responsible for all affairs pertaining to environmental compliance and management. The General Manager (Admin and Compliance) is the focal person for implementation of EMP and its management. He is responsible for preparation of Environmental Monitoring Report and its submission to EPA Sindh also

11 Durk

Environmental Management Plan Chapter-6: Environmental Management Plan (EMP)

report. He also maintains all records/ information regarding environmental compliance and reporting.

Manager (Admin and Compliance) conducts all monitoring and sampling activities and also watches routine operations for compliance with safety procedures. Table 11 summarizes the key responsibilities of the Admin and Compliance (A&C) division personnel.

	Position	Key Responsibility
1	General Manager (Admin and Compliance)	Overall supervision of compliance with legal environmental requirements.
2.	Manager (Admin and Compliance)	Overall implementation of EMP and submission of Environmental Monitoring Reports to EPA. Maintenance of record and information
		Monitoring and sampling of waste streams.
4.	Admin and Compliance Team	Accident/Incident reporting

Table 11: Key Responsibilities of A&C Division

6.5 Environmental Monitoring System

Environmental Monitoring is the process of repeated observation and measurement of one or more environmental quality parameters to enable changes to be observed over a period of time. These changes relate to the physical, chemical and biological parameters of various phases of the environment such as soil, water and air. The main objective of the environmental monitoring program is the conservation of the quality of these components of environment.

At STML Environmental Monitoring being carried out to obtain quantitative information on current levels of harmful or potentially harmful parameters in waste discharges. The information so obtained enables an assessment of the level of the pollution of these parameters, status of legal compliance, and the control measures that need to be implemented.

The following is an outline of a typical monitoring program that can be modified as necessary to meet the needs of EPA. The monitoring program includes the following at a minimum:

- Effluent shall be monitored for SEQS Priority Parameters for normal plant conditions.
- Gaseous emissions from boiler shall be monitored for SEQS Priority Parameters.
- Gaseous emissions levels of generators shall be monitored for SEQS Priority Parameters.
- Dust emissions level under Normal Plant Conditions for SEQS Priority Parameters Particulates.
- Waste generation monitored for type, quantity, and disposal. Disposal shall be carried out through authorized contractor.
- Ambient air quality and noise level shall be monitored for SEQS priority parameters.
- Drinking water quality monitoring for SDWQS for biological, chemical and physical parameters.
- 6.6 Environmental Monitoring Plan

6.6.1 Description of Self-Monitoring Requirement for STML

A. Category

The STML, being a textile (spinning & garments) and packing material industry, has been classified under:

- Category C with respect to the effluent discharges.
- Category B with respect to the emissions from Gas fired boiler and generator and oil based generator (standby).
- Category B with respect to the dust emissions from Spinning Section.

B. Monitoring Parameters

The Priority Parameters for monitoring of effluent include:

• Under normal plant conditions: pH, TSS, TDS, BOD, COD and Oil and Grease.

The Priority Parameters for monitoring of emissions include:

 Under normal condition for emissions from oil based generators: CO, SOx, NOx, and Particulates



- Under normal plant conditions for emissions from gas based generator and Boiler
 Equipment: CO and NOx.
- Under normal plant conditions for emissions from spinning exhaust: SPM, PM₁₀, and PM_{2.5}.

C. Monitoring Frequency

The monitoring requirements for liquid effluents are:

- Monitoring of priority parameters for normal plant conditions on biannually basis.
- Monitoring of priority parameters for startup and upset conditions on hourly basis.
- Reporting of all start-up and upset conditions and total time elapsed in such conditions in biannually environmental monitoring report.

The monitoring and reporting requirements for gaseous emissions are:

- Monitoring of priority parameters for normal plant conditions from gas based boiler and generator on quarterly basis.
- Monitoring of priority parameters for normal plant conditions from oil based generator (standby) on quarterly basis.
- Monitoring of priority parameters for normal plant conditions from Spinning Exhaust on quarterly basis.
- Monitoring of metal analysis in all gaseous emissions every two years (only where fuel contains hydrogen sulfide H₂S more than 20 ppm.

D. Reporting Requirements

The Environmental Monitoring Report (EMR) is to be submitted to EPA Sindh on biannually basis for liquid effluents analysis and quarterly basis for the generator, boiler and spinning exhaust for the exhaust emissions monitoring.

The effluent data and emission data would be reported as per the format given in Form-A and Form-B respectively under Schedule VI of the Rules. The cover sheet of the EMR will be in accordance with the format given in Form-C under Schedule VI of the Rules.



Environmental Management Plan

TAR TEXTILE MILLS LIMITED



6.6.2 Monitoring Plan for Effluent

Environmental monitoring plan for effluents of the prior to its discharge into the sewerage system is mentioned in Table-12.

Parameters	Monitoring	frequency	Responsibility	Supervision
	Normal Plat Condition	Upset & Startup Conditions		
Temperature	Biannually	Hourly	Manager (A&C)	General Manager (A&C)
рН @ 25 С	Biannually	Hourly	Manager (A&C)	General Manager (A&C)
Total Suspended Solids	Biannually	N/A	Manager (A&C)	General Manager (A&C)
Total Dissolved Solid Biochemical Oxygen Demand(mg/l)		N/A N/A	Manager (A&C) Manager (A&C)	General Manager (A&C) General Manager (A&C)
Chemical Oxygen Demand (mg/l) Oil and Grease	Biannually Biannually	N/A N/A	Manager (A&C) Manager (A&C)	General Manager (A&C) General Manager (A&C)

Table 12: Environmental Plan Monitoring Plan for Effluent

6.6.3 Monitoring Plan for Air Emission

Environmental monitoring plan for the gaseous emissions is mentioned in Table-13.

Table 13: Environmental Monitoring Plan for Gaseous Emissions.

Parameters	Fuel Source	Operational Status	Monitoring frequency	Responsibility	Supervision
		Generator	(Gas based)		\$
CO and NOx,	Gas Based	Normal		Generator In-	Manager (A&C)
		Waste Heat I	Recovery Boiler	all an	wait an

Particulates

	anagement Plan nmental Manager	nent Plan (EMP)	۵. Tai	R TEXTILE MILLS LIMITED	
CO, NOx.	Gas Based	Normal Operation	Quarterly	Section In- charge	Manager (A&C)
		Spinnir	ıg Exhaust		
SPM, PM _{10,} PM _{2.5}	N/A	Normal Operation	Quarterly	Section In- charge	Manager (A&C)
		Generator (Oi	Based Standby)	
CO, NOx, SOx and Particulates	Diesel Oil (standby)	Normal Operation	Quarterly	Generator - In charge	Manager (A&C)

6.6.4 Monitoring Plan Ambient Air Quality

Ambient air will be monitored for the factory area as per following plan mentioned in the Table 13.

Table 14: Monitoring Pl	an Ambient Ai	r Quality
-------------------------	---------------	-----------

Area	Parameters	Frequency	Responsibility	Supervision
Entrance Gate of Factory	SOx, NO, NOx, CO, PM2.5, PM10	Annually	Manager (A&C)	General Manager (A&C)
Mid of Factory Area	SOx, NO, NOx, CO, PM2.5, PM10	Annually	Manager (A&C)	General Manager (A&C)
End point of Factory Area	SOx, NO, NOx, CO, PM2.5, PM10	Annually	Manager (A&C)	General Manager (A&C)

6.6.5 Monitoring Plan for Ambient and Occupational Noise Level Ambient and Occupational noise level will be monitored for the high risk areas and low risk areas as per following plan mentioned in the Table-15.

Table 15: Ambient and Occupational Noise Monitoring Plan



STAR	TEXTILE	MILLS	LIMITED
------	---------	-------	---------

Env	iron	menta	al Ma	nagement Plan		
					 1	

C11A1	connentar wanagemen	it Flatt				Carl & Ree
Chap	oter-6: Environmental N	Aanagement	t Plan (EMP)			
	Generator	dB	Quarterly	Manager (A&C)	General	
	Area, Boiler				Manager	
	Area, Process				(A&C)	
	Area				(

6.6.6 Monitoring Plan for Drinking Water Quality

Drinking water which will be provided to the employees will be monitored as per following plans mentioned in Table 16.

Table 16: Drinking Water Quality Monitoring Plan

Sources	Parameters	Locations	Frequency	Standards
All Drinking water sources	E-Coli, fecal coliforms, Total Coliforms	Drinking water sources	Quarterly	ssdwq /who
,	oH, Color, Turbidity, IDs, Total Hardness			
	Chloride, Fluoride,			

6.6.7 Solid Waste Management Plan

Environmental management plan for the solid waste being generated at STML is mentioned at Table 17. Services of an approved Contractor will be acquired for disposal of hazardous waste materials.

Parameters	Collection	Disposal	Supervision	Disposal Responsibility
Fabric waste	Housekeeping	Recycling	Garments Section In- charge	Manager (A&C)
Cotton dust	Housekeeping	Recycling	Spinning Section In- charge	Manager (A&C)
Paper waste	House Keeping	Recycling	Housekeeping Department	Manager (A&C)
Cartons	Packaging Dept.	Recycling Reuse	Warehouse Department	Manager (A&C)
	House Keeping			
Polyethylene bags	Warehouse	Recycling	Warehouse Department	Manager (A&C)

34

	lanagement Plan onmental Manageme	nt Plan (EMP)	TAR TEXTILE MILLS LIMITED		
Substance cans, bottles and Drums	Warehouse	Recycling Return to Supplier for Reuse	Warehouse Department	Manager (A&C)	
Plastic waste	House Keeping Packaging Dept.	Recycling	Housekeeping Department	Manager (A&C)	
Tube lights	Maintenance Dept.	Incineration after Hg extraction	Housekeeping Department	Manager (A&C)	
Empty oil containers	House Keeping Maintenance Dept.	Reuse Recycling	Housekeeping Department	Manager (A&C)	
Other wastes	In charge of Departments	Incineration / Landfill	Housekeeping Department	Manager (A&C)	

6.6.8 Summary of Environmental Monitoring Plan

Following table-18 shows the summary of the entire monitoring plan for STML.

S.No	Category / Equipment	Parameters to be Monitored	Frequency	No Sampling Points		
1	Environmental monitorin	g plan for gaseous emissior	IS ALL ALL COLOR			
a.	Generator Oil Operated (Standby)	CO, NOx, SOx, Particulates	Quarterly basis	01		
b.	Generator Gas Operated	CO and NOx	Quart <mark>erly</mark> basis	01		
с.	Boilers Natural Gas Operated	CO and NOx	Quarterly Basis	01		
d.	Spinning Exhaust	SPM, PM ₁₀ , PM _{2.5}	Quarterly Basis	01		
e.	Metal Analysis of Generators	Pb, Hg, Cd, Ar, Cu, Sb, Zn	Once every two year	01		
2	Environmental monitoring plan for drinking water					
а	Biological Parameters	E-Coli, fecal coliforms, Total Coliforms	Quarterly	01		

35

Table 18: Summary of Environmental Management Plan

En	viror	nmental Management Plan	,	TAR TEXTILE MILLS LIMITED	(
Chapter-6: Environmental Management Plan (EMP)								
	b	Physical Parameters	pH, Color, Turbidity, TDs, Total Hardness	Quarterly	01			
	c	Chemical Parameters	Chloride, Fluoride,	Quarterly	01			
3		Environmental monitoring plan for ambient and occupational noise levels.						
	a	Factory Boundaries (North, East, West and South)	dB	Bi-annually	04			
	b	Generator Area, Boiler Area, Process Area.	dB	Quarterly	04			
4		Environmental monitoring plan for ambient air						
	а	Entrance Gate of Factory	SOx, NO, NOx, CO, PM _{2.5} , PM ₁₀	Annually ,	03			
		Mid of Factory Area						
		End point of Factory	1 . W B T ()					
		Area.						
5		Environmental monitoring plan for effluent.						
	а	Wastewater Streams	pH, BOD, COD, TSS, TDS and Oil and Grease.	Biannually	02			

