

MAHARASHTRA POLLUTION CONTROL BOARD

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Sion Circle, Sion (E),
Mumbai - 400 022

Consent order No :- 1.0/BO/CAC-Cell/EIC No:-PN-28139-15/CAC- 10200 Date-10/10/2016

To,
M/s. Thermax Ltd.,
D-7, D-13, and D-1 Block,
MIDC Chinchwad,
Pune - 411044.

Subject: 1st Consent to Operate for Expansion (Syngas) and Renewal of existing Consent to Operate and their amalgamation in RED category.

- Ref:
1. Earlier Consent to operate granted vide consent no BO/CAC-Cell/EIC No. PN-23996-15/CAC-6180 dtd 25.05.2015.
 2. Earlier Consent to establish for expansion granted vide consent no BO/CAC-Cell/EIC No:-PN-21474-14/CAC/9657 dtd. 18.10.2014.
 3. Your application is approved in CAC meeting held on 27.04.2016.

Your application: CO1601000340

Dated: 06.01.2016

For: 1st Consent to Operate for Expansion and Renewal of existing Consent to Operate and their amalgamation under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 5 of the Hazardous Wastes (M, H & T M) Rules 2008 is considered and the consent is hereby granted subject to the following terms and conditions and as detailed in the schedule I, II, III & IV annexed to this order:

1. The consent is granted for a period from 01.03.2016 to 28.02.2021.
2. The actual capital investment of the industry 133.44 Crs. (As per C.A. Certificate submitted by industry).
3. The Consent is valid for the manufacture of -

Sr. No.	Product Name	Maximum Quantity
1.	Industrial chiller	660 Nos./Year
2.	Industrial boiler & heater	5020 Nos. /Year
3.	Aqueous Solution (Lithium Bromide)	600 MT/Year
4.	Syngas (only for research & testing purpose)	194 MT/Month

4. Conditions under Water (P&CP), 1974 Act for discharge of effluent:

Sr. no.	Description	Permitted quantity of discharge (CMD)	Standards to be achieved	Disposal
1.	Trade effluent	71.4	As per Schedule -I	Reused/Recycle in process & remaining use on land for gardening
2.	Domestic effluent	252	As per Schedule -I	

5. Conditions under Air (P& CP) Act, 1981 for air emissions:

Sr. no.	Description of stack / source	Number of Stack	Standards to be achieved
1.	Chiller (Main building)	1	As per Schedule -II
2.	S.R. Furnace	1	As per Schedule -II
3.	Boiler pl-11	1	As per Schedule -II
4.	Chiller (EERC)	1	As per Schedule -II
5.	S.R. Furnace	1	As per Schedule -II
6.	Tube shed boiler	1	As per Schedule -II
7.	D.G. Set (500 KVA)	1	As per Schedule -II
8.	D.G. Set (500 KVA)	1	As per Schedule -II
9.	D.G. Set (500 KVA)	1	As per Schedule -II
10.	D.G. Set (625 KVA)	1	As per Schedule -II
11.	Diesel Air compressor	1	As per Schedule -II
12.	R & D Stack	1	As per Schedule -II
13.	Syngas Combustor		As per Schedule -II
14.	Catter Piller D.G. Set – 725 KVA	1	As per Schedule -II
15.	Energy building D.G. Set	1	As per Schedule -II
16.	3000Tr Catter Piller – 725 KVA	1	As per Schedule -II

6. Conditions about Non Hazardous Wastes:

Sr. no:	Type Of Waste	Quantity & UoM	Treatment	Disposal
1	Metal scrap	2500 MT/Year	---	By Sale to authorized party.
2	Wooden scrap	900 MT/Year	---	
3	Plastic scrap	6.0 MT/Year	---	
4	Paper scrap	55 MT/Year	---	
5	Garbage/Rubber/Fiber	275.5 MT/Year	---	
6	Empty Jumbo Bags used for Coal	1224 Nos./Y	---	Reused
7	Wooden crates used for coal	600 Nos./Y	---	Reused
9	Cartons	100 Nos./Y	---	Sale to authorized vendor
10	Ash	875 Ton/Y	---	Sale to authorized vendor/Landfill
11	Sludge filter cake	91 Ton/Y	---	Sale to authorized vendor

7. Conditions under Hazardous Waste (MH & TM) Rules, 2008 for treatment and disposal of hazardous waste:

Sr. No.	Type Of Waste	Categor	Quantit	UOM	Treatmer	Disposal
1.	Used / Spent oil	5.1	20.0	KL/Y	----	sale to authorized Recycler
2.	Waste/Residue containing oil, oily cotton waste, etc	5.2	15.0	MT/Y	----	CHWTSDF

Sr. No.	Type Of Waste	Category	Quantit	UOM	Treatmer	Disposal
3.	Discarded Asbestos	15.2	5.0	MT/Y	----	CHWTSDF
4.	Process waste , sludge & sludge & Filler Residue	21.1 21.2	15.0	MT / Y	----	CHWTSDF
5.	Chemical sludge from waste water treatment	34.3	20.0	MT / Y	----	CHWTSDF
6.	Discarded container/barrel /liners contaminated with hazardous waste /chemical	33.3	5000	Nos./Y	----	Sale to authorized Recycler
7.	E-waste (Miscellaneous Electrical Items, computers & spares)	CEEW1 ITEW2	4.0	MT/Y	----	Sale to authorized Recycler
8.	X ray Films Fixer solution	----	1.5 0.5	MT/Y KL/Y	----	Sale to authorized Recycler

8. The Board reserves the right to review, amend, suspend, revoke etc. this consent and the same shall be binding on the industry.
9. This consent should not be construed as exemption from obtaining necessary NOC/permission from any other Government authorities.
10. a) Thermax Ltd., (Energy Division) Plot No.-111, b) M/s. Thermax Ltd.(TBW Division), plot no-12, 21, 25 & 26, c) M/s. Thermax Ltd., D1 Block, Plot No. D- 7/1, D-13, and D-13/A, have provided common STP of design capacity 600 CMD in the premises of M/s. Thermax Ltd (TBW Division), plot no 12, 21, 25 & 26, Block MIDC Chinchwad and they are jointly responsible for the treatment of their domestic effluent. In case of the non-compliance of proper O & M, discharging pollutants, M/s. Thermax Ltd.,(Energy Division) Plot No. -111, b) M/s. Thermax Ltd.(TBW Division), plot no-12, 21, 25 & 26, c) M/s. Thermax Ltd., D1 Block, Plot No. D-7/1, D-13, and D-13/A, will be jointly & severally responsible for legal obligations, action, etc.

For and on behalf of the
Maharashtra Pollution Control Board

(Dr. P. Anbalagan) IAS
Member Secretary

Received Consent fee of -

Sr. No.	Amount (Rs.)	DD. No.	Date	Drawn On
1.	Rs. 4,86,680/-	600061	03.02.2015	CITI BANK
2.	Rs. 3,14,060/-	560264	30.12.2015	CITI BANK
3.	Rs. 5,33,760/-	845242	05.04.2016	CITI BANK
4.	Rs. 15,000/-	232580	22.09.2016	CITI Bank

Copy to:

1. Regional Officer -Pune- He is directed to return the existing one BG of Rs. 5 laksh obtained towards O&M of pollution control system as two BGs are obtained for same purpose and also return the BG of Rs. 2 lakh obtained towards carry out the performance evaluation of STP as industry has submitted the same.
2. Sub-Regional Officer-Pimpri Chinchwad.
3. They are directed to ensure the compliance of the consent conditions.
4. Chief Accounts Officer, MPCB, Mumbai.
5. CC/CAC desk- for record & website updation purposes.



Maharashtra Pollution Control Board

Schedule-I

Terms & conditions for compliance of Water Pollution Control:

1) A] As per your application, you have provided the Effluent Treatment Plant with the design capacity of 100 CMD.

B] The Applicant shall operate the effluent treatment plant (STP) to treat the trade effluent so as to achieve the following standards prescribed by the Board or under EP Act, 1986 and Rules made there under from time to time, whichever is stringent.

Sr No.	Parameters	Standards as per EP Act, 1986
	I. Compulsory Parameters	Limiting Concentration in mg/l, except for pH
01	pH	5.5 to 9.0
02	Oil & Grease	10
03	BOD (3 days 27°C)	100
04	Total Dissolved Solids	2100
05	Suspended Solids	100
06	COD	250
07	Chloride	600
08	Sulphate	1000
09	Chromium	0.1
10	Iron (as Fe)	3.0

C] The metal bearing industrial effluent shall be segregated and reused back into process and remaining treated effluent shall use on land for gardening. There shall not be any discharge outside the factory premises.

2) A] As per your consent application, you have provided the sewage treatment system with the design capacity of 600 CMD.

B] The Applicant shall operate the sewage treatment system to treat the sewage so as to achieve the following standards/ prescribed under EP Act, 1986 and Rules made there under from time to time, whichever is stringent.

(1)	Suspended Solids	Not to exceed	50	mg/l.
(2)	BOD 3 days 27°C.	Not to exceed	30	mg/l.
(3)	COD	Not to exceed	100	mg/l.

C] The treated domestic effluent shall be reused back into process and remaining treated effluent shall use on land for gardening. There shall not be any discharge outside the factory premises.

D] In case the treatment system is combined for trade effluent and sewage then the standards and disposal path prescribed at sr. no.1 B & C of schedule I shall be applicable.

3) The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification thereof & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or and extension or addition thereto.

- 4) The industry shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.
- 5) The Applicant shall comply with the provisions of the Water (Prevention & Control of Pollution) Cess Act, 1977 and as amended, by installing water meters, filing water cess returns in Form-I and other provisions as contained in the said act.

Sr. no.	Purpose for water consumed	Water consumption quantity (CMD)
1.	Industrial Cooling, spraying in mine pits or boiler feed	153.6
2.	Domestic purpose	283
3.	Processing whereby water gets polluted & pollutants are easily biodegradable	111
4.	Processing whereby water gets polluted & pollutants are not easily biodegradable and are toxic	Nil

- 6) The Applicant shall provide Specific Water Pollution control system as per the conditions of EP Act,1986 and rule made there under from time to time/ Environmental Clearance / CREP guidelines.

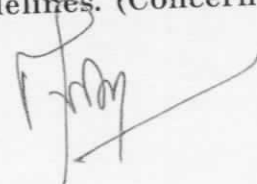


Schedule-II
Terms & conditions for compliance of Air Pollution Control:

1. As per your application, you have provided the Air pollution control (APC) system and also erected following stack (s) and to observe the following fuel pattern-

Sr. No.	Stack Attached To	APC System	Height in Mtrs.	Type of Fuel	Quantity & UoM	S %	SO ₂ Kg/Day
1	Chiller (main building)	Settling Chamber	30	Fire Wood	500 Kg/day	0.2	2
2	S.R. Furnace (Pl no 14)	Cyclone	30	LDO	130 Lit/hr	1.8	112.32
3	Boiler (pl-11)	Multi-Cyclone	50.5	FO	762 Lit/hr	4.5	1645.92
4	Chiller (EERC)	Scrubber (Acidic / Basic / Pack bed)	30	LDO	45 Lit/hr	1.8	38.88
5	S.R. Furnace (Pl no 8)	NA	30	LDO	94 Lit/hr	1.8	81.21
6	Tube shed boiler	NA	6.5*	LDO	80 Lit/hr	1.8	69.12
7	D.G. Set (500 KVA)	NA	4.5*	HSD	92 Lit/hr	1	44.16
8	D.G. Set (500 KVA)	NA	4.5*	HSD	92 Lit/hr	1	44.16
9	D.G. Set (500 KVA)	NA	4.5*	HSD	92 Lit/hr	1	44.16
10	D.G. Set (625 KVA)	NA	5.0*	HSD	120 Lit/hr	1	57.6
11	Diesel Air compressor	NA	2.3*	HSD	25 Lit/hr	1	12
12	R & D Stack	NA	30.5 (common)	FO	200 Lit/hr	4.5	432
13	Syngas Combustor	Cyclone dust collector & wet scrubber		Coal	350 Kg/hr	0.5	84
				Diesel	20 Lit/hr	1	9.6
14	Catter Piller D.G. Set - 725 KVA	NA	10.0*	HSD	134 Lit/hr	1	64.32
15	Energy building D.G. Set	NA	12	HSD	134 Lit/hr	1	64.32
16	3000 Tr Catter Piller - 725 KVA	NA	2.3*	HSD/FO/LDO	----	1	----

2. The Applicant shall provide Specific Air Pollution control equipments as per the conditions of EP Act, 1986 and rule made there under from time to time / Environmental Clearance / CREP guidelines. (Concern section shall mention specific control equipments)



3. The applicant shall operate and maintain above mentioned air pollution control system, so as to achieve the level of pollutants to the following standards:

Particulate matter	Not to exceed	100 mg/Nm ³ .
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4. The Applicant shall obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or replacement well before its life come to an end or erection of new pollution control equipment.
5. The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).

Schedule-III
Details of Bank Guarantees

Sr. No.	Consent (C to E/O/R)	Amt of BG Imposed	Submission Period	Purpose of BG	Compliance Period	Validity Date
1	CtoR	Rs. 5 lakh (to be extended)	15 days	Towards operation and maintenance of pollution control system	Continue	30.06.2021



- 16) The applicant shall install a separate meter showing the consumption of energy for operation of domestic and industrial effluent treatment plants and air pollution control system. A register showing consumption of chemicals used for treatment shall be maintained.
- 17) Conditions for D.G. Set
- Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.
 - Industry should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room should be designed for minimum 25 dB (A) insertion loss or for meeting the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB (A) shall also be provided. The measurement of insertion loss will be done at different points at 0.5 meters from acoustic enclosure/room and then average.
 - Industry should make efforts to bring down noise level due to DG set, outside industrial premises, within ambient noise requirements by proper siting and control measures.
 - Installation of DG Set must be strictly in compliance with recommendations of DG Set manufacturer.
 - A proper routine and preventive maintenance procedure for DG set should be set and followed in consultation with the DG manufacturer which would help to prevent noise levels of DG set from deteriorating with use
 - D.G. Set shall be operated only in case of power failure.
 - The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set.
 - The applicant shall comply with the notification of MoEF dated 17.05.2002 regarding noise limit for generator sets run with diesel
- 18) The industry should not cause any nuisance in surrounding area.
- 19) The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standard in respect of noise to less than 75 dB (A) during day time and 70 dB (A) during night time. Day time is reckoned in between 6 a.m. and 10 p.m. and night time is reckoned between 10 p.m. and 6 a.m.
- 20) The applicant shall maintain good housekeeping.
- 21) The applicant shall bring minimum 33% of the available open land under green coverage/ plantation. The applicant shall submit a statement on available open plot area, number of trees surviving as on 31st March of the year and number of trees planted by September end, with the Environment Statement.
- 22) The non-hazardous solid waste arising in the factory premises, sweepings, etc. be disposed of scientifically so as not to cause any nuisance / pollution. The applicant shall take necessary permissions from civic authorities for disposal of solid waste.
- 23) The applicant shall not change or alter the quantity, quality, the rate of discharge, temperature or the mode of the effluent/emissions or hazardous wastes or control equipments provided for without previous written permission of the Board. The industry will not carry out any activity, for which this consent has not been granted/without prior consent of the Board.
- 24) The industry shall ensure that fugitive emissions from the activity are controlled so as to maintain clean and safe environment in and around the factory premises.
- 25) The industry shall submit quarterly statement in respect of industries' obligation towards consent and pollution control compliance's duly supported with documentary evidences (format can be downloaded from MPCB official site).
- 26) The industry shall submit official e-mail address and any change will be duly informed to the MPCB.
- 27) The industry shall achieve the National Ambient Air Quality standards prescribed vide Government of India, Notification dt. 16.11.2009 as amended.

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