

MAHARASHTRA POLLUTION CONTROL BOARD

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Mumbai - 400 022

Consent No: Format 1.0/ BO/CAC-Cell/EIC No:-NG-13350-15/CAC/CAC-14033

Date- ~~10/2015~~ 04/11/2015

To,

M/s.Adani Power Maharashtra Ltd.,
Plot No.A-1,Tiroda Growth Center,
MIDC-Tiroda, Dist.-Gondia.

Subject: Renewal of consent with Increase in Capital Investment under RED category.

Ref : 1. Earlier Consent granted vide No. Format 1.0/ BO/CAC-Cell/EIC No:-NG-11486-14/CAC/CAC- 960, dtd. 28/01/2015.
2. Minutes of CAC meeting held on 09.10.2015

Your application: CR1507000296

Dated: 01/07/2015

For: Renewal of Consent with Increase in Capital Investment 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:

- The consent is granted for a period from 01/09/2015 to 31/8/2020
- The actual capital investment of the industry is Rs.18753.42/- Crs. (As per C. A. Certificate submitted by industry)
- The Consent is valid for the manufacture of -

Sr. No.	Product / By-Product Name	Maximum Quantity in MT/A
1.	Electricity Generation (5 x 660) Phase-I (Unit 1 & 2) Phase-II(Unit 3,4 & 5)	3300 MW
2.	Fly Ash Bricks	10000 Nos./day

- 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	35405	As per Schedule -I	Recycle in ash handling, Water sprinkling & horticulture/ green belt development.
2.	Domestic effluent	192	As per Schedule -I	On Land of 253.628 acres for gardening

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

Sr. no.	Description of stack / source	Number of Stack	Standards to be achieved
1.	Boiler	5 nos.	As per Schedule -II

6. Conditions about Non Hazardous Wastes:

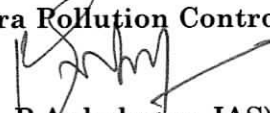
Sr. no.	Type Of Waste	Quantity & UoM	Treatment	Disposal
1	Fly Ash	10210.96 T/D	---	Ash Pond/ Reused in embankment of rail line with in the plant Premises and manufacturing of fly ash bricks
2	Bottom Ash	2304.74 T/D	----	Brick manufacturer/ash disposed off in the ash dyke.
3	Domestic/Kitchen Waste	140.00 Kg/d	---	Disposed off through organic waste convert to generate Manure

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

Sr. No.	Type Of Waste	Category	Quantity	UOM	Treatment	Disposal
1	Used /spent oil	5.1	400	KL/Y	---	Sale to Authorized reprocesses / recycler
2	Discarded containers / barrels / liners	33.3	1500	Nos./ Y	---	Return to party / To CHWTSDf
3	Toxic metal-containing residue from water purification	34.2	200	KL/Y	---	To CHWTSDf
4	Chemical sludge from waste water treatment	34.3	Irrespective of any quantity	---	---	To CHWTSDf

8. The Board reserves the right to review, amend, suspend, revoke etc. this consent and the same shall be binding on the industry.
9. Industry shall promote adoption of clean coal (with ash content less than 34%) and clean power generation technologies and comply with the notification issued by MoEF for utilization of fly ash from coal or lignite based thermal power plants dated 14th September, 1999 and as amended on 3rd November, 2009.
10. This consent should not be construed as exemption from obtaining necessary NOC/permission from any other Government authorities.

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.	3,75,07,000/-	581484	29/06/2015	SBI Bank
2.	19,61,940/-	612939	17/07/2015	SBI Bank
3.	15,00,27,360/-	672829	21/10/2015	SBI Bank

Copy to:

1. Regional Officer -Nagpur. He is directed to forfeit BG of Rs. 2/- Lakhs obtained Towards utilization of flyash as per fly ash notification 1999. He is also directed to release the existing BG's of Rs. 2/- Lakhs, Rs. 2/- Lakhs & Rs. 2/- Lakhs obtained against submission of affidavit regarding violation of consent condition by installing Brick Mfg. plant without consent from Board & submission of design details of ETP & STP respectively as SRO reported compliance of the same.
2. Sub-Regional Officer-Bhandara, MPCB, They are directed to ensure the compliance of the consent conditions.
3. Chief Accounts Officer, MPCB, Mumbai.
4. CC/CAC desk- for record & website updation purposes.

[Handwritten Signature]

Schedule-I

Terms & conditions for compliance of Water Pollution Control:

1) A] As per your application, you have provided the Effluent Treatment Plant (ETP).

B] The Applicant shall operate the effluent treatment plant (ETP) 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 prescribed by Board
I.	Condenser cooling Water	Limiting Concentration in mg/l, except for pH
01	pH	Between 6.5 to 8.5
02	Temperature	Not to exceed 5°C. than that of intake water temp.
03	Free available chlorine	Not to exceed 0.5 mg/l
II.	Boiler Blow Down	
01	Suspended Solids	Not to exceed 100mg/l
02	Oil & Grease	Not to exceed 10mg/l
03	Copper (Total)	Not to exceed 1mg/l
04	Iron (Total)	Not to exceed 1mg/l
III.	Cooling Tower Blow Down	
1	Free available chlorine	Not to exceed 0.5mg/l
2	Zinc	Not to exceed 1mg/l
3	Chromium (Total)	Not to exceed 0.2mg/l
4	Phosphate	Not to exceed 5mg/l
IV	D.M. Plant Effluent	
1	pH	Between 5.5 to 9
2	Suspended Solids	Not to exceed 100mg/l
3	Oil & Grease	Not to exceed 10mg/l
4	BOD 3 days	Not to exceed 30mg/l
5	COD	Not to exceed 250mg/l
5	TDS	Not to exceed 2100mg/l

C) The treated effluent shall be recycled/ reused for ash handling, coal handling, dust suppression etc to the maximum extent and remaining shall be utilized on land of 253.628 acres for gardening.

2) A.] As per your consent application, you have provided the sewage treatment system with the design capacity not mentioned.

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.

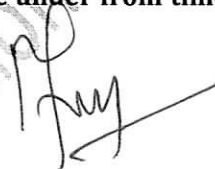
(1)	Suspended Solids.	Not to exceed	500	mg/l.
(2)	BOD 3 days 27°C.	Not to exceed	30	mg/l.
(3)	COD.	Not to exceed	100	mg/l.

C] The treated effluent shall be recycled/ reused for ash handling, coal handling, dust suppression etc to the maximum extent and remaining shall be utilized on land of 253.628 acres for gardening- 192 CMD.

- 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	163728
2.	Domestic purpose	1440
3.	Processing whereby water gets polluted & pollutants are easily biodegradable	26592
4.	Processing whereby water gets polluted & pollutants are not easily biodegradable and are toxic	3120

- 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	Boiler (1 RCC Stack with 3 nos. of Steel Flues)	ESP	275.00 Common Stack	Coal	7520 T/D	0.5%	75200
2	Boiler	ESP		Coal	7520 T/D	0.5%	75200
3	Boiler	ESP		Coal	8028 T/D	0.5%	80280
4	Boiler (1 RCC Stack with 2 nos. of Steel Flues)	ESP	275.00 Common Stack	Coal	8028 T/D	0.5%	80280
5	Boiler	ESP		Coal	8028 T/D	0.5%	40140
7				Furnace Oil	90 KL/D	1.8%	324
8				LDO	95.52 KL/D	1.2%	230

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 industry shall provide & Operate adequate APC's to coal handling plant.
4. Industry shall provide concrete roads & mist type sprinklers/dust suppression system in raw material storage & handling area.
5. 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	50 mg/Nm ³ .
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6. The Applicant shall obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or replacement/alteration well before its life come to an end or erection of new pollution control equipment.
7. 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).
8. **Control Equipments:**
- Electrostatic Precipitator of sufficient capacity provided to each Boiler and any other sources of particulate matter shall be operate and maintain so as to ensure that TPM emission do not exceed 50 mg/Nm³
 - Dust collection system and automatic water sprinkler system provided to Coal Handling Plant shall be operate and maintain continuously.
 - Dust collector of sufficient capacity provided to coal crusher and any other sources of SPM shall operate and maintain continuously.
 - There shall not be any fugitive emission from coal storage yard.
 - The industry shall make necessary provisions for installing FGD with 90 % efficiency in its design and layout ad sufficient floor space so that it can be installed in future, as & when directed by Board.

**Schedule-III
Details of Bank Guarantees**

Forfeited History

Sr. No.	Consent (C to E/O/R)	Amt of BG Imposed	Amt of BG to be forfeited from BG imposed	Purpose of BG Forfeiture
1	C to R (Already forfeited)	Rs. 1/- Lakhs	Rs. 1/- Lakhs	Towards utilization of flyash as per flyash notification 1999 as SRO reported that the fly ash was found dumped at 3-4 locations
2	C to R (Already forfeited)	Rs. 5/- Lakhs	Rs. 2/- Lakhs	Towards Operation & Maintenance of the Effluent Treatment Plant to achieve disposal standards as discharge of effluent found outside factory premises.
3	C to R (Already forfeited)	Rs. 25/- + 25/- = Rs. 50/- Lakhs	Rs. 10/- Lakhs	Towards Operation and Maintenance of Air Pollution Control Devices to achieve emission standards as JVS stack out of 37 reports 8 reports are exceeding standards & AAQM out of 10 reports submitted 5 reports are exceeding limits

BG's to be forfeited

Sr. No.	Consent (C to E/O/R)	Amt of BG Imposed	Amt of BG to be forfeited from BG imposed	Purpose of BG Forfeiture
1	C to R	Rs. 2/- Lakhs	Rs. 2/- Lakhs	Towards utilization of flyash as per flyash notification 1999 as SRO reported that the fly ash was found dumped at 3-4 locations

Fresh to be obtained & Existing to be extended

Sr. No.	Consent (C to E/O/R)	Amt of BG Imposed	Submission Period	Purpose of BG	Compliance Period	Validity Date
1	C to R (top up to be obtained)	10/- Lakhs	15 Days	Towards utilization of flyash as per flyash notification 1999	Continuous	31.12.2020
2	C to R (Existing to be Extended)	Rs. 7/- Lakhs	15 Days	Towards Operation & Maintenance of the Effluent Treatment Plant to achieve disposal standards.	31.08.2020	31.12.2020
3	C to R (Existing to be Extended)	Rs. 60/- Lakhs	Rs. 10/- Lakhs	Towards Operation and Maintenance of Air Pollution Control Devices to achieve emission standards.	31.08.2020	31.12.2020

Existing BG to be extended

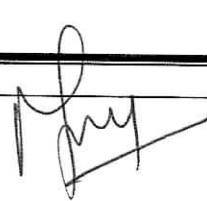
Sr. No.	Consent (C to E/O/R)	Amt of BG Imposed	Submission Period	Purpose of BG	Compliance Period	Validity Date
1	C to R	5 Lacs	Already submitted	Compliance of existing consent conditions no. 15.	31.08.2020	31.12.2020

Sr. No.	BG Code	Amt of BG Imposed	Submission Period	Purpose of BG	Compliance Period	Validity Date
	PNC1			Handling and disposal of flyash		
1	PNC1a	5/- Lakhs	15 Days	To switch over to 100% usable dry fly ash collection and storage	31.08.2020	31.12.2020
2	PNC1c	1/- Lakh	15 Days	Towards Mitigation of seepages from wet fly ash conveying system	31.08.2020	31.12.2020
3	PNC1d	1/- Lakh	15 Days	Towards Scientific operation of ash pond i.e. uniform distribution of wet slurry in the pond so as to have minimum depth of water	31.08.2020	31.12.2020
4	PNC1e	1/- Lakh	15 Days	Towards Providing arrangement for reuse of 100% seepage water, arising from ash pond, for ash slurry	31.08.2020	31.12.2020
5	PNC1e	5/- Lakhs	15 Days	Towards Scientific closure of abandoned ash pond with soil cover and plantation over it	31.08.2020	31.12.2020
6	PNC1e	5/- Lakhs	15 Days	Towards Scientific closure of abandoned ash pond with soil cover and plantation over it	31.08.2020	31.12.2020

Schedule-IV

General Conditions:

- 1) The applicant shall provide facility for collection of environmental samples and samples of trade and sewage effluents, air emissions and hazardous waste to the Board staff at the terminal or designated points and shall pay to the Board for the services rendered in this behalf.
- 2) Industry should monitor effluent quality, stack emissions and ambient air quality monthly/quarterly.
- 3) The applicant shall provide ports in the chimney/(s) and facilities such as ladder, platform etc. for monitoring the air emissions and the same shall be open for inspection to/and for use of the Board's Staff. The chimney(s) vents attached to various sources of emission shall be designated by numbers such as S-1, S-2, etc. and these shall be painted/ displayed to facilitate identification.
- 4) Whenever due to any accident or other unforeseen act or even, such emissions occur or is apprehended to occur in excess of standards laid down, such information shall be forthwith Reported to Board, concerned Police Station, office of Directorate of Health Services, Department of Explosives, Inspectorate of Factories and Local Body. In case of failure of pollution control equipments, the production process connected to it shall be stopped.
- 5) The applicant shall provide an alternate electric power source sufficient to operate all pollution control facilities installed to maintain compliance with the terms and conditions of the consent. In the absence, the applicant shall stop, reduce or otherwise, control production to abide by terms and conditions of this consent.
- 6) The firm shall submit to this office, the 30th day of September every year , the Environmental Statement Report for the financial year ending 31st March in the prescribed Form-V as per the provisions of rule 14 of the Environment (Protection) (Second Amendment) Rules, 1992.
- 7) The industry shall send used oil to reprocess/re refiners authorized by MPCB & the Hazardous Waste to CHWTSDF Butibori Nagpur as per the provision contain in the HW(MH&TM) Rules 2008.
- 8) The industry should comply with the Hazardous Waste (M,H & TM) Rules, 2008 and submit the Annual Returns as per Rule 5(6) & 22(2) of Hazarsous Waste (M,H & TM) Rules, 2008 for the preceding year April to March in Form-IV by 30th June of every year.
- 9) An inspection book shall be opened and made available to the Board's officers during their visit to the applicant.
- 10) The applicant shall obtain Consent to Operate from Maharashtra Pollution Control Board before actual commencement of the Unit/ Activity for proposed other units (in case of Consent to establish).
- 11) **The applicant shall make an application for renewal of the consent at least 60 days before the date of the expiry of the consent.**
- 12) Industry shall strictly comply with the Water (P&CP) Act, 1974, Air (P&CP) Act,1981 and Environmental Protection Act,1986 and industry specific standard under EP Rules 1986 which are available on MPCB website(www.mpcb.gov.in).
- 13) The industry shall constitute an Environmental cell with qualified staff/personnel/agency to see the day to day compliance of consent condition towards Environment Protection.
- 14) Separate drainage system shall be provided for collection of trade and sewage effluents. Terminal manholes shall be provided at the end of the collection system with arrangement for measuring the flow. No effluent shall be admitted in the pipes/sewers downstream of the terminal manholes. No effluent shall find its way other than in designed and provided collection system.
- 15) Neither storm water nor discharge from other premises shall be allowed to mix with the effluents from the factory.
- 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
 - a) Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.
 - b) 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.
 - c) 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.
 - d) Installation of DG Set must be strictly in compliance with recommendations of DG Set manufacturer.
 - e) 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
 - f) D.G. Set shall be operated only in case of power failure.
 - g) The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set.
 - h) 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.
- 28) **The applicant shall comply with the conditions stipulated in Environmental Clearance granted by MoEF/GoM vide No.J-13011/4/2008-IA.II(T), dtd.29.09.2008, J 13012/81/2008-IA.II (T), dtd 22.04.2010 & J-13012/81/2008-IA.II(T), dtd.30.03.2012.**
- 29) The industry shall comply with the notification issued by MoEF for utilization of fly ash from coal or lignite based thermal power plants dated 14th September, 1999 and as amended on 3rd November, 2009.

- 30) Industry shall provide dry fly ash handling & collection system and utilize the fly ash as per the fly ash notification of the Govt. of India
- 31) The use of beneficiated coal as per GOI Notification shall be implemented. Transportation of coal shall be carried out through Rly facility at Tiroda factory site. Fly ash shall be transported through bunker having closed system, coal carrying conveyor belt shall be covered from all side with provision of water springing/spraying system properly.
- 32) The applicant shall Operate online opacity meter/continuous monitoring system for process stack emission analysis & same shall be directly connected to MPCB website <http://mpcb.gov.in> as well as to the respective Regional Office within 3 months period and operate the same regularly.
- 33) The applicant shall Operate three continuous automatic ambient air and micrometeorological monitoring station at location indicated by MPC Board to be set up and operate at its own cost for measurement of SO₂, NO_x and particulate matter. These CAAQMS shall also have necessary provision of networking to the Air Quality Monitoring network of MPCB.
- 34) They shall promote adoption of clean coal and clean power generation technologies.
- 35) **General guidelines for handling, storage & safety of Chlorine cylinders & drums.**
- a) Chlorine gas units and cylinders shall be housed in separate rooms, easily accessible, close to the point of application and convenient for truck loading and safe container handling
- b) The floor shall be flat and at least 150 mm above the surrounding ground and drainage shall be adequate. The height of the container room should be at least 4.0 m. Under no circumstances such units shall be housed in basement or below ground level since the chlorine gas is heavy and settles into depressions.
- c) The floor shall be flat and at least 150 mm above the surrounding ground and drainage shall be adequate. The height of the container room should be at least 4.0 m. Under no circumstances such units shall be housed in basement or below ground level since the chlorine gas is heavy and settles into depressions.
- d) The temperature in the installation room shall be within the range of +4 to + 40°C. The chlorine gas containers and chlorine gas pipes shall not be exposed to direct heat radiations and shall be protected from sun rays.
- e) Electrical installations inside the chlorine gas rooms shall be limited to the absolute minimum required. While laying electrical wiring and fixtures adequate safety precautions shall be observed during their installation of ensuring safe use of electricity.
- f) Chlorine gas containers shall not be bumped, dropped or rolled on the ground and no object shall be allowed to strike them with force.
- g) Cylinders shall be stored vertically so that a leaking container, if found, can be removed with the least possible handling of others.
- h) No other objects except chlorine gas storing containers shall be kept in the room.
- i) All operating and storing rooms for chlorine gas appliances and containers shall be fire proof.
- j) First aid box and eye wash fountain shall be provided outside chlorinator room.
- k) Water shall never be applied to the chlorine leak to stop it, as it will only make it worse.
- l) When a chlorine leak occurs, the ventilation system should be operated immediately before any person enters the chlorination room.
- m) In case of fire, the cylinders and drums containing chlorine shall be protected by spraying with water since the containers can burst at temperatures of over 70°C. Source of pressurized water shall be provided adjacent to the chlorination room.
- n) No direct flame should be applied to the chlorine cylinder when heating becomes necessary.

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