Encon energy efficient cooling towers & axial flow FRP fans





WORLD LEADING MANUFACTURER OF AXIAL FLOW FRP FANS





- Established in the year 1981
- Led by Mr. R. K. Sharma, With tech-know-how as

a Aerodynamic Engineer.



Technical know-how

- Scientists from Aero space engineering have been involved in the development of our FRP fans.
- National Aeronautical Laboratory & Hindustan
 Aeronautical Laboratory were involved in structural design of FRP blades.
- Professor Mr. A. K. Rao (consultant to Lokheed USA) & his group at IIT Banglore (Development in design), have given the design of these FRP fans.



Our Activities

- > Supply of energy efficient FRP axial fans widely used in cooling towers and air handling units.
- > Design and supply of energy efficient cooling towers across all the ranges.
- Cross Flow
- Counter Flow
- ➤ Revamping/Restoration of the existing cooling towers, to improve efficiency & longevity.
- > Improve the Performance of cooling systems.



Manufacturing Facilities

 Well equipped two units near Mumbai, India with total in-house facilities for the production of FRP Fan Assembly.

 Complete dedicated Plant & Machinery designed for the development & molding of Hollow as well as Solid construction FRP Blades.



Testing Facilities

- Wind Tunnel- Encon has developed prototype designs for various models and tested in wind tunnel setup.
- Electronic moment balancing machine
- Dynamic balancing machine
- Hardness tester
- Cantilever test fixture



Testing Facilities

- Coin tapping test
- Universal testing machine
- Pendulum impact tester
- Heat distortion test equipment
- Muffle furnace
- Anemometer
- Sound meter
- Power analyzer



Quality Assurance

- The aerodynamic performance of FRP fan are evaluated in Wind Tunnel Test Bench as per AMCA 210 85 (Standard).
- Raw material are selected with stringent quality as per international ISO / ASTM Standards followed by 100 % in house process inspection during manufacturing of FRP Fan Assembly.
- ENCON designed FRP fans are designed & manufactured to out last the life of cooling tower, without any wear and tear and loss of performance.



Distinctive Benefits.

- ➤ The fan blades are made from E-Glass Epoxy Fiber reinforced (FRP) in comparison to normal FRP/GRP with quality grade epoxy resin to resist even the most corrosive air system.
- > FRP fans are aerodynamically designed to achieve minimum 80% efficiency.
- Fan achieves a low noise level due to airfoil profile of the blades.
- Encon FRP fans have delivered trouble free operation through out life.
- > Encon fans are backed with 30 years of experience.



Comparison of E-Glass FRP & GRP Laminates

PROPERTY	ASTM STD.	E-Glass FRP Laminates	FRP / GRP Laminates
Tensile Strength(in p.s.i.)	D 638	45000 - 100000	18000 - 55000
Modulus of elasticity in tension 10 ⁵ psi	D 638	25 - 35	10 - 28
Flexural strength (in p.s.i.)	D 790	45000 - 100000	18000 - 80000
Sheer strength (in p.s.i.)	D 732	18000 - 32000	12000 - 18000
Bond strength (lb.)	D 952	1800 -4080	2000 - 3000
Heat resistance (in °C)		<mark>1</mark> 05 - 180	36 - 90
Water absorption (in %)	D 570	<mark>0</mark> .05 - 0.30	0.2 - 2.5
Effect of strong Acids	D 543	Zero	Some attack
Effect of strong alkalies	D 543	Zero	Some to severe
Impact strength Izod(ft.lb./inch of notch)	D 256	10 - 45	19 - 35
Rupture in tensile (N/MM²)	47	54	22
Rupture in shearing (N/MM²)		72	53



Our presence world wide.

Bangladesh

Belgium

China

Canada

Chez republic

England

Germany

Hungary

Indonesia

Iran

Iraq

Italy

Japan

Kuwait

Malaysia

Nepal

Netherland

Nigeria

Phillipines

Pakistan

Russia

Saudi arabia

Sri lanka

Singapore

Thailand

Turkey

Taiwan

Vietnam

Yeman



Our presence world wide.

Our World wild Installations is 450000+

Export

We are present in 30 countries with 281 marquee customers 200,000+

Domestic

In India we have a 628 clients with our installations 250,000+



Encon Product Range

Fan Diameter : 0.5 FEET to 65 FEET

No. of Blades : 2 to 20

Air Flow $: 1 \text{ M}^3/\text{SEC} \text{ to } 1800 \text{ M}^3/\text{SEC}$

Pressure : 10 PASCAL to 1400 PASCAL

Speed : 81 RPM to 3000 RPM

Power Rating : 0.5 HP to 1500 HP

Operating Temperature : - 10 °C to 230 °C



Application Areas

- Cooling Towers
- Air Cooled Heat Exchangers
- Air Cooled Condensers
- Humidification Plants
- Airwasher Plants
- Mines & Ventilation
- Radiator Engines
- Dryers
- Kiln Shell
- Industrial Ventilation & Exhaust
- Withering Troughs In Tea Gardens
- Man Coolers
- HT Motor Coolers
- Transformer Coolers



Industries Served

- Power Plant
- Chemical & Process
- Petro Chemicals
- Refinery
- Oil & Gas
- Fertilizer Plants
- Cement Plants
- Mines
- All Metal Plants

- Pharmaceuticals
- Textiles
- Food Processing
- Hotels & Shopping Malls
- Tea Industries
- Pulp, Paper & Tobbaco



Company: Deepak Fertilizers (28 Feet Dia)

Sr. No	Description	GRP Fan (Paharpur)	FRP Fan (Encon)	Power Saving (%)	Increase Airflow (%)
01.	Airflow	1758130	2113782		20.23
	(In M3 / Sec.)	Property of the last			
02.	Power (In Kw)	118	77 <mark>.2</mark> 1	34.56	

Saving KW/Year = $40.79 \times 24(hours) \times 360(days)$

= 352425Kw

Rupees/Year = $352425 \times Rs. 4.50$

= Rs. 1585915

Pay-back Period = 3.1 Months



Company: GSFC-Vadodara (22 Feet Dia)

Sr. No	Description	Alum. Fan (Southern Fan)	Frp Fan	Power Saving (%)	Increase Airflow (%)
01.	Airflow (In M3 / Sec.)	973185	1119 <mark>941</mark>	1	15.08
02.	Power (In Kw)	42.5	26 <mark>.8</mark> 6	36.8 <mark>0</mark>	

Saving $KW/Year = 15.64 \times 24(hours) \times 360(days)$

 $= 135129.6 \, \text{Kw}$

Rupees/Year = 135129.6 X Rs. 5.40

= Rs. 7,29,700

Pay-back Period = 2.8 Months



Company: Tata Power Co. Ltd., Jojobera, India

Application : Cooling Tower

Location: Ct-fan No.:1b

Sr. No	Description	Alum. Fan (Paharpur)	Frp Fan	Power Saving (%)	Increase Airflow (%)
01.	Airflow (In Cfm)	848123	88 <mark>2</mark> 585		4.06
2	Power (In Kw)	44.63	2 <mark>9.</mark> 34	34.2 <mark>5</mark>	

Saving $KW/Year = 15.29 \text{ Kw X } 24(\text{hours}) \times 360(\text{days})$

= 132105.6 Kw Units

Rupees/Year = 132105.60 Kw X @ Rs. 3.20 / Unit

= Rs. 4,22,737

Pay-back Period = 10.21 Months



Company: Tata Power Co. Ltd., Belgaum, India

Application : Cooling Tower

LOCATION: CT FAN - 3

Sr. No	Description	Alum. Fan	Frp Fan	Power Saving In %	Increase Airflow In %
1	Airlow In Cfm	533186	5,93 <mark>,</mark> 940		11.0
2	Power In Kw	27.26	16.2	40.57	- 411
3	Current In Amps	47.2	34. <mark>4</mark> 3		
4	Voltage In Volts	414.66	407		

Saving KW/Year = 11.06×24 (hours) $\times 360$ (days)

= 95558.40 Kw

Rupees/Year @ Rs. 4.10 / Unit = 95558.4 X 4.10

= Rs. 3,91,789

Pay-back Period = 2.98 Months



Company: Reliance Industries Ltd., Jamnagar Refinery

Application : Air Fin Coolers

Location : Aromatics Plant

Qty. Replaced: 96 Nos.

Sr. No	Description	Alum. Fan (Cofimco)	Frp Fan	Power Saving (%)	Increase Airflow (%)
01.	Airflow (In M3 / Sec.)	836.97	1024.03		22.34
02.	Power (In Kw)	2219.93	1408 <mark>.</mark> 98	36.53	

Saving KW/Year = 810.95×24 (hours) $\times 360$ (days)

= 7006608 Kw

Rupees/Year = 7006608 X Rs. 4.10

= Rs. 2,87,27,092

Pay-back Period = 2.31 Months





2 pages

DUNCANS INDUSTRIES LIMITED FERTILISER DIVISION

Works: Panki Fertiliser Works, Post Box No. 7, Udyognagar, Kanpur-208 022 Tel: PBX 211281 Fax: 0512-211268, 211280 Tix: 0325-208 CCFK IN Gram: INDEXPLO-KANPUR

TO WHOM IT MAY CONCERN

We have converted our overhead cooler fan blades from aluminium to fibre glass reinforced blades on our energy saving programme. All these blades were procured by M/s ENCON (INDIA) Bombay. A total of 21 sets of blades, details of which are given hereunder were procured from this Company in the year 1995. Since then these fan blades are working quite satisfactorily:

- 14 ft. dia blades 13 sets (one set consisting of 6 Nos.)
- 12 ft. dia blades 12 sets (one set consisting of 6 Nos.)
- 7 ft. dia blades 3 sets (one set consisting of 6 Nos.)

S GHOSH

GENERAL MANAGER (MAINTENANCE)

17 February 1998

Registered Office : Duncan House, 31 Netaji Subhas Road, Calcutta-700 001 Tel : 2200962/2185 Tix : 021-7317 DBCO IN 021-7304 NRC IN Fax : 248-6021





GUJARAT STATE FERTILIZERS COMPANY LIMITED

Registered Office: P. O. Fertilizernagar-391 750, Dist. Vadodara. Gujarat, India.

Gram : FERTILIZER Phone : 72451, 72641 72651, 72751 Telex : 0175-211/384 Fax : 0265-72966

March 18, 1991

TO WHOMSOEVER IT MAY CONCERN

This is to certify that M/s Encon (India) have supplied us 2 FRP Fans complete assemblies, each of 8' and 10' Dia., which are running since last 2 months. Performance so far is satisfactory. Power saving achieved is about 20% and 15% respectively.

For Gujarat State Fertilizers Co Ltd

P A Dave Supdt (Modernisation)

M/s ENCON (INDIA) 2-B/17, 4th Floor Shivkripa N C Kelkar Road Opp Shivaji Park P.O. Dadar (W) Bombay - 400 028



GUJARAT STATE FERTILIZERS COMPANY LIMITED

POLYMERS UNIT

P. O. Petrofils - 391 347, Dist. Vadodara. (Gujarat) INDIA.

GSFC-PU/MECH/96 2nd Jan. 1996. Gram : POLYGUJ

Phone: 373341-373342 372872-370316

370317-370318

Telex : 0175-6378

Fax : 0265-372794

TO WHOMSOEVER IT MAY CONCERN

This is to certify that M/s. Encon(India), Bombay had supplied two sets of 8 feet dia. 6 blades, FRP fan for our cooling tower. It performance of the aluminium and FRP fans were carried out jointly and was found that ENCON make FRP fan is consuming about 40% less power at same duty condition of existing aluminium blade fans.

by Rey. AD

for GSFC Ltd - Polymers Unit,

N.R. Desai Manager (Mech.)

To :

M/s. Encon (India) 2B/17, 'Shivkripa' N.C. Kelkar Road, Opp : Shivaji Park PO : Dadar (West) Bombay - 400 028

REGISTERED OFFICE 1 P O. Fertilizernagar-391 750, District: Vadodara. (Gujarat) INDIA Phone: 372451-372651-372751-372641 Fax: 0265-372966



18/08/05

TO WHOM-SO-EVER IT MAY CONCERN

This is to certify that M/S ENCON, Mumbai had supplied and successfully commissioned their 28 Feet diameter energy efficient FRP Fan in our PAHARPUR make Cooling Towers with respect to our following purchase orders.

SR.NO	PONOS.	DATE	QTY.
01.	MM/264-461096/00	23.12.2003	1 No.
02.	MM/264-416101 00	14.04.2004	8 Nos.
03.	MM/264-416101A00	28.05.2004	1 No.

We feel privileged to comment that there had been energy saving of 25% with the aerodynamically designed ENCON FRP Fan at same operating duty conditions after replacement of our existing PAHARPUR make GRP fan as the same are operating without any wear & tear and loss of performance since installations of the same.

We value the customer support & after sales services rendered by ENCON and wish them to continue their positive efforts in promoting the energy conservation with their noble products to cater the industrial demand.

Thanking you,

Yours faithfully, For INDO GULF FERTILISERS LTD.

N.C. BANSAL GM (ENGG.) Indo Gulf Fertilizer

INDO GULF FERTILISERS LIMITED

Factory & Regd. Office: Jagdishpur Industrial Area – 227 817, Distt. Sultanpur (U.P.), India Tel.: 05361-70032-38, Fax: 05361-70172 Mum Off: Corporate Finance Cell, Aditya Birla Centre, 3rd Floor, A Wing, S.K. Ahire Marg, Worli, Mumbai – 25 Tel: 022-56525427, Fax: 6555791

Marketing Office: 14-A/5, Park Road, Lucknow (U.P.) India - 226 001, Tel: 0522 - 238436, 238439, 239059, Fax: 0522 - 238514, † Pelhi Office: \$12-A, World Trade Centre, Barakhambha Lane, New Delhi, - 110 001Tel: 3414174, 3411268, 3411345, Fax: 011-3414398



कृभको श्याम फर्टिलाइजर्स लिमिटेड KRIBHCO SHYAM FERTILIZERS LIMITED

KSFL/DGM/1/07

TO WHOM SO EVER IT MAY CONCERN

10.01.2007

THIS IS TO CERTIFY THAT M/S ENCON, MUMBAI HAD SUPPLIED AND SUCCESSFULLY COMMISSIONED FOLLOWING SIZES OF THEIR ENERGY EFFICIENT HALLOW FRP FANS IN OUR COOLING TOWERS WITH RESPECT TO OUR FOLLOWING ORDERS AS UNDER.

S. No.	P.O. NO. & DATE	FAN DIA	QUANTITY	APPLICATION
1	OCFL/SPN/ME/SG/250663/	14 FEET	2 Nos.	AIR COOLER
2	8050827/5783 03.10.2005 OCFL/SPN/ME/SG/221834/	28 FEET	2 Nos.	COOLING
	8050768/5210 13.09.2005			TOWER
3	OCFL/SPN/ME/SG/221834/ 8050768/5210 13.09.2005	28 FEET	8 Nos.	COOLING
	& AMM. DTD. 21.01.2006			TOWER

FNERGY SAVING \$ 25 % AS PER OUR CALCULATION UNDER THE SAME OPERATING DUTY CONDITIONS COMPARED TO ORIGINAL GRP SOLID BLADE FANS. WE ARE ALSO SATISFIED WITH THEIR AFTER SALES SERVICES FOR THE ENDURANCE OF PRODUCT & CUSTOMER SUPPORT RENDERED TO US. THANKING YOU.

YOURS FAITHFULLY.

FOR KRIBHCO SHYAM FERTILIZERS LTD.

S.S. TEWARI D.G.M (Maint)

> ग्राम एवं पोस्ट पिपरौला, शाहजहाँपुर-242 001 (उ०प्र०) Village & Post Office : Piprola, Shahjahanpur-242 001 दूरभाष/Phones : 05842-240001, 240002, 240004, 240007 फैक्स/Fax : 91-5842-240005

ए.10, सेक्टर-1 कृभको भवन, नोएडा, 201301 जिला : गौतमबुद्ध नगर (उ०प्र०)
A.10. Sector-1 KRIBHCO Bhawan, Noida-201301 Distt. Gautam Budh Nagar (U.P.)
दूरभाष/Phones: 0120-2545463, फैक्स/Fax: 0120-2545465
पंजीकृत कार्यालय: रेड रोज हाउस 49–50 नेहरू प्लेस, नई दिल्ली-110019
REGD. OFFICE: Red Rose House 49-50 Nehru Place, New Delhi-110019

Clients







ENCON



























































PETROCHEMICALS & REFINERIES



























NITIN SPINNERS LIMITED

























Sri Ramakrishna Mills (Coimbatore) Ltd





















SUtle





Forbes Gokak Ltd.











Promoted By Dr. K.K.Birla



Satyam Spinners Pvt. Ltd. SPINNING TRUSTED YARNS



































M/S ENCON COOLING TOWERS PVT. LTD., 2, ASHIRWAD, N. C. KELKAR ROAD, DADAR (WEST), MUMBAI - 400 028

TO WHOM-SO-EVER IT MAY CONCERN

We're glad to certify that ENCON, Mumbai had successfully supplied and commissioned their high efficiency Trickle Fill for efficiency improvement to our re-conditioning of our SOUTHERN make RCC Counter Flow Cooling Tower of Recovery Plant against our following Purchase Orders as under.

01)	4200158472/213 / 25.08.2015	SUPPLY OF TRICKLE FILLS F/DISTRIBUTION SYSTEM	1 CELL
02)	4200176917/213 / 27.06.2016	SUPPLY OF TRICKLE FILLS F/DISTRIBUTION SYSTEM	4 CELL

ENCON provided their service team for complete installation with Trickle Fill structure materials to enhance CT efficiency in the Cooling Tower with their supplied material against our above orders and fulfilled the performance as per our above contract terms & conditions.

We feel privileged to comment that there had been improvement by @ 10% overall efficiency in each cell. As a results, we are been able to manage by keeping one cell idle during pick summer season this year. Overall, CTW inlet temperature after above modification with their technology benefitting to maintain better process condition.

We are also satisfied with their prompt after sales services for the customer support by deputing their service team for joint installation of their product to benefits to BIRLA CELLULOSIC.

We wish them to continue to put-forth their sincere efforts to support every industry to benefit energy conservation with their quality product at all times.

Thanking you

Yours faithfully

Mr. TUSHAR SURESH WANKHEDE

(Assistant General Manager)
HOD-Recovery dept (Process & Maintenance)
For GRASIM INDUSTRIES LTD.

(UNIT : BIRLA CELLULOSIC)

Mr PIYUSH PATEL
(Dy.manager-Maint)



Grasim Industries Limited Unit - Birla Cellulosic Works : Birladham, Kharach Kosamba R.S. Dist. Bharuch (Gujarat) – 394 120 INDIA CIN : L17124MP1947PLC000410 Telephone +91 2646 270001-005, 270301-305 Fax +91 2646 270010, 270130 Email bc-kharach.info@adityabirla.com

Liaison Office: 11th Floor – 1101 & 1102 OCEAN, Opposite Vadodara Central Mall, Vikram Sarabhai Marg, Vadiwadi, Vadodara – 390023, Gujarat – Regd. Office: P.O. Birlagram, Nagda (MP) – 456 331. Phone: (07366) 246760-66, Fax: 255198, Website: www.grasim.com



TO,
M/S ENCON COOLING TOWERS PVT. LTD.,
2, ASHIRWAD,
N. C. KELKAR ROAD,
DADAR (WEST),
MUMBAI - 400 028

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We are also satisfied with their prompt after sales services for the customer support by deputing their service team for joint installation of their product to benefits to BIRLA CELLULOSIC.

We wish them to continue to put-forth their sincere efforts to support every industry to benefit energy conservation with their quality product at all times.

Thanking you

Yours faithfully,

Mr. TUSHAR SURESH WANKHEDE

(Assistant General Manager) HOD-Recovery dept (Process & Maintenance) For GRASIM INDUSTRIES LTD.

(UNIT: BIRLA CELLULOSIC)

Mr PIYUSH PATEL (Dy.manager-Maint)



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December 12th 2016

TO WHOM SO EVER IT MAY CONCERN

This is to certify that Hindalco Industries Ltd, Renusagar Power Division has placed an Order No. RO7/141442544/Z40 dated 13th February, 2014 on Encon Cooling Towers Pvt. Ltd., Mumbai for up-gradation of 1 (One) No. of Cooling Tower No. #3, by replacing existing splash type fill system with supply of high quality, high performance Trickle Fills, Make - HEWITECH (NC 20), high efficiency along with support structure, hardware using latest FRP Pultruded Technology.

The Cooling Tower consists of 6 (six) cells in back to back construction of RCC structure and has a total water flow of 13000 CUM/HR.

Encon Cooling Towers Pvt. Ltd. have redesigned the Cooling Tower Thermal, to be suitable for the Trickle Grid NC 20 Fills of 1.35M height, designed the structural supports and other changes required in the system, so as to complete the works as per purchase order. The work of thermal upgrade / renovation as above has been completed by ENCON on 26th January, 2015 and the tower has been taken into operation from 27th January, 2015. The work has been completed satisfactorily and the Cooling Tower is in successful operation.

It is observed that after the thermal up gradation, the cooling water temperature reduced by 2 Degree C in comparison to the earlier performance of Cooling Tower with the old Splash fills.

For Hindalco Industries Limited (Renusagar Power Division)

Head - Turbine & Auxiliaries



14TH OCTOBER '2015

TO WHOM-SO-EVER IT MAY CONCERN

This is to certify that M/s ENCON, Mumbai had supplied and successfully commissioned their Counter Flow design new generation Cooling Towers with Pultruted Technology while replacing our existing conventional design BKK make Cooling Towers against our following Purchase Orders.

SR. NO.	P. O. NO. / DATE / ORDER VALUE	QUANTITY
01)	9213900696 / 08.03.2013 / USD 315,000/=	3 CELLS
02)	9215993007 / 14.07.2014 / USD 288,000/-	2 CELLS

We're glad to comment that above Cooling Towers modification are successfully commissioned as per our Purchase Orders terms & conditions and are satisfactorily operating as per the performance guaranteed by ENCON without any wear & tear and loss of performance since the installations of the same till-date.

We further value the customer support & after sales services rendered by ENCON for their positive efforts in promoting the quality technology services to cater the industrial demand and upgrading performance services.

Thanking you,

Yours faithfully. For THAI RAYON PUBLIC COMPANY LTD.

VIJAY JARIWALA

HEAD (AUXILLIARY MAINT.)

THAI RAYON PUBLIC COMPANY LIMITED Office 16th Pt., Nohatun Plaza Bidg., 888/160-1, Plaenchit Rd., Telephone +66-2-2536745-54 Website www.therayon.co

Fax +00-2-439-4381 E-mail admin,tro-padityabili 6-Mos 2 Ayustava-Angirung Highway, Tambol Posa, Telephone +66-35-612227-9 Website www.thurayon.com ou Anothono, Augthoric 14000 Thailand Fax

+66-2-2543181 E mail admin.tro@adityabirla.com +66-35-611908 E mail factory tre@adityabina.com



JBF Industries Limited

SURVEY NO. 273, UMERKUIN ROAD, VILLAGE-ATHOLA, SILVASSA-396 230.D. & N. H. (U.T.) (INDIA)

REGD. OFFICE: TEL.: 91-0260-2642745, 2642746, 2643861 • FAX: 91-0260-2642297 e-mail:jbfpoy@hotmail.com

Website :http://www.ibfindia.com

Ref: IBF/WORKS/2004

Date: 21.04.2004

TO WHOMSOEVER IT MAY CONCERN

This is to certify that M/s. ENCON, Mumbai has supplied and commissioned their 3 Nos. of 16 Feet Dia Energy Efficient FRP Fans in our 700 m3/Hr. Cooling Towers while also modifying various structural changes with latest designs of Munters PVC Drift Eliminators and Fills through their associates M/s. Engineers Services & Accessories, Mumbai vide our Purchase Order No. 0771 dated 09th January, 2001.

We are glad to acknowledge that there had been energy saving as per agreed basis at same operating duty conditions after the replacement of our existing GRP Bladed Fans originally supplied by Hammon Thermopack Engineers Pvt. Ltd., Mumhai

We also have found their supplied and erected 2 Nos. of 850 m3/Hr. Energy Efficient Counter Flow Cooling Towers performing in absolute perfect condition without any wear and tear and loss of performance since April, 2003.

For JBF INDUSTRIES LIMITED.

(N.K. SHAH) DIRECTOR (COMM.) 987 JBJ Industries Limited

WORKS & REGD. OFFICE : SURVEY NO. 273, UMERKUIN ROAD, VILLAGE-ATHOLA, SILVASSA, D.&N.H.(U.T.) PHONE - 91-260-2642745, 2642746, 2643861 FAX - 91-260-2642297

E-mail: ibfpoy@hotmail.com

Website: http://www.jbfindia.com

REF: JBF/POY/2003

DATE: 17.02.2003

TO WHOMSOEVER IT MAY CONCERN

THIS IS TO CERTIFY THAT M/S. ENCON (INDIA) ALONGWITH THEIR ASSOCIATES M/S. ENGINEERING SERVICES & ASSOCIATES, MUMBAI HAD BEEN ENTRUSTED THE JOB OF REVAMPING OF OUR COOLING TOWER OF FOLLOWING DETAILS, INSTALLED IN MAY, 1996.

TYPE OF TOWER

- 1D COUNTERFLOW

NO. OF CELLS

- 3

CAPACITY

- 3 x 700 M3/HR, 40°/32°/27°

FANS MOTORS -3 x 16' DIA - 30 H.P.

ABOVE COOLING TOWER HAD NEVER GIVEN THE RATED OUTPUT AND DURING DRY SEASON i.e. IN JANUARY 2002. IT WAS GIVING HARDLY 1300 - 1400 M3/HR WITH DELTA T OF 4 - 5° C, COLD WATER TEMP. 33° - 34° C.

M/S. ENCON (INDIA) AND M/S. ENGINEERING ASSOCIATES COMPLETED THE REVAMPING JOB IN 3 MONTHS AND ENHANCED THE PERFORMANCE OF COOLING TOWER BY INCORPORATING FOLLOWING CHANGES.

- 1. CHANGE OF FILLS & FANS.
- 2. CHANGE OF HOT WATER DISTRIBUTION SYSTEM.
- 3. INSTALLATION OF NEW DESIGN, HIGH EFFICIENCY DRIFT & ELIMINATORS.

SINCE THEN i.e. MAY 2002, THE CAPACITY OF THE COOLING TOWER HAS ENHANCED TO 1900 - 1950 M3/HR AT DELTA T OF 4 - 5° C AT 29 - 30° C AT WET BULB TEMPERATURE OF 27° C.

AFTER REVAMPING, THE COOLING TOWER IS GIVING VERY SATISFACTORY PERFORMANCE.

FOR JBF INDUSTRIES LIMITED,

(B.N. RAD)

SR. VICE PRESIDENT (WORKS)

JBF HOUSE, OLD POST OFFICE LANE, KALBADEVI ROAD, MUMBAI - 400 002. PHONE - 91-022-22060866/72/73, 22056609/10 FAX - 91-022-22057799

HEAD OFFICE: 8th FLOOR, EXPRESS TOWERS, NARIMAN POINT, MUMBAI - 400 021. (INDIA) TEL.: (91.22) 22885959 FAX: (91.22) 22886393 e-mail:jbf@vsnl.com Internet site: http://www.jbfindia.com





TO,
M/S ENCON COOLING TOWERS PVT. LTD.,
2, ASHIRWAD,
N. C. KELKAR ROAD,
DADAR (WEST),
MUMBAI - 400 028

TO WHOM-SOEVER IT MAY CONCERN

This is to certify that M/S ENCON had successfully supplied, supervised and commissioned Wind Wall project for CT(1A&2A) performance efficiency improvement in our 2 x 600MW Units at LANCO ANPARA POWER LTD., Sonebharda, (U. P), against following Purchase Orders;

01)	4000002551 / 21.12.2015	PANEL WIND WALL WITH FRP COMPOSITES	11 CELLS x ONE CT
02)	400002614 / 29.04.2016	PANEL WIND WALL WITH FRP COMPOSITES	11 CELLS x ONE CT

The CT performance improvement achieved by average 1.4 Degree Celsius reduction benefit in the cold basin water temperature.

The overall performance is found satisfactory. We wish to continue to put-forth their sincere efforts to support & benefit energy conservation in the national interest.

Thanking you,

For LANCO POWER LTD.

ARUN KAPOOR

Vice (President R)
Vice President

Vice President Lanco Anpara Power Limited Anpara, Sonebhadra - 231225

Lanco Anpara Power Limited

Corporate Office: Lanco House, Plot # 397, Udyog Vihar, Phase-3, Gurgaon-122 016, New Delhi Region, India.
T: +91 124 4741000 to 03 F: +91 124 4741169
Site Office: Village Anpare, Sonebhadra District, Uttar Pradesh, India.
Registered Office: 411/9, Riverside Apartments, New Hyderabad, Lucknow-226 007, Uttar Pradesh, India.
T: +91 522 4027 803 F: +91 522 2780 132
www.lancogroup.com

Corporate Identity Number: U31200UP2006PLC031982

TO, M/S ENCON COOLING TOWERS PVT. LTD., 2, ASHIRWAD, N. C. KELKAR ROAD, DADAR (WEST), MUMBAI - 400 028

COMPLETION CERTIFICATE

We're glad to certify that you have completed the Cooling Tower job of supply of virgin quality of PVC Fills awarded by LANCO AMARKANTAK POWER LTD., C. G. against our Purchase Order No. 4100115978 dtd. 1,3th July '2016 for installation in our PAHARPUR make Cooling Tower of 1 x 660 MW Power Plant.

ENCON provided their erection team for complete installation to their high quality PVC Fills for installation in our RCC Counter Flow Cooling Tower replacing existing PAHARPUR supplied PVC Fills as per our above contract terms & conditions. We've further placed our new Purchase Order No. 4100120331 dtd. 8th June '2017 for further modification as per above.

We are also satisfied with their prompt after sales services for the customer support by deputing their service team for joint installation of their product to benefits to . LANCO AMARKANTAK POWER LTD.

We wish them to continue to put-forth their sincere efforts to support every industry to benefit their quality product and services at all times.

Thanking you,

Yours faithfully, For LANCO POWER LTD.

B. K. MISHRA Chief Operating Officer

Lanco Amarkantak Power Limited

(Formerly Lanco Power Limited)

Corporate Office: Lanco House, Plot # 397, Udyog Vihar, Phase-3, Gurgaon-122016, New Delhi Region, India. T: +91 124 4741000 F: +91 124 4741024 E: lapl@lancogroup.com

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Corporate Identity Number: U40109TG2001PLC036265





