

BEER Talk

Volume 9, November 2011

For us **BEER** Means . . . **Brewery Engineering Expertise and Reliability.**



Dear Readers,

It gives me immense pleasure to present PRAJ Beer Talk, Volume 9 to you.

Indian Brewing Industry is growing steadily and added about 45 million cases capacity during last year. Out of this, PRAJ has contributed to about 30 million cases capacity creation. This has been possible only because of the confidence reinforced by our valued customers, time and again since the establishment of brewery business group 15 years ago within PRAJ.

PRAJ offers integrated services which include concept to commissioning for brewery plants which provide significant advantages like higher efficiency, timely execution and project cost optimization. With global experience in project engineering and turn-key plants, PRAJ is uniquely placed to serve the international Brewing Industry in South East Asia, Africa and India.

With valued support from our customers and associates, we have added new facets to our resources during the year. We have strengthened and enhanced our Engineering, Manufacturing and Project Management capabilities and added state of the art equipment to our manufacturing facilities.

This year we completed 4 Greenfield Brewery projects and 8 Brownfield brewery projects, to the customer's fullest satisfaction.

In fact, over 60% of our business comes from repeat orders, which further strengthens our position as the most cost effective and value-for-money supplier of choice. This is testimony to our undoubted leadership in India.

I would like to express my sincere thanks to those who have supported and shown continued confidence in us. I look forward to continue our valuable relationship.

Atul Mulay (Vice President)
Brewery Business Group

PRAJ Milestones -

- Largest Lauter Tun of India
- Largest Direct Expansion Unitank of India
- Largest Glycol Cooled Unitank of India
- Largest Brewery of India
- Maximum references of Beer filtrations in India, filtering 80% of India's Beer
- Maximum Greenfield breweries within one Year in India
- Maximum number of Brews/day from Lauter tun and Mash Filter based Brew houses in India
- Maximum number of Mash Filters in India, producing @ 6 million cases annually, reaching to 15 million cases in 2012
- Capacity addition by PRAJ equipment to the tune of 30 million cases out of total 45 million cases addition in 2010-11
- Only Company to have state of the art analytical facility as per International standards from Raw material handling to End product
- Only Company to have the best track record for on time execution among industry.

PRAJ Association with Major Brewers



COMMISSIONING Update



Wave Distillery and Brewery



The Wave Distillery and Brewery can claim to be the largest brewery of 1 million HPLA in a single phase to be constructed in India. The brewery is located in Northern India in the town of Aligarh in the state of Uttar Pradesh. The brewery consumption in north and eastern India is nearly 25% of the National beer consumption. The brewery was put on stream in the shortest span of 11 months. PRAJ has installed India's first Meura "Hybrid" Mash Filter. Apart from this, the brewery has many other distinguishing features like the biggest glycol based Unitanks of gross volume of 3000 HL (WV: 2400 HL). PRAJ also undertook value engineering to drive down project investment in terms of civil and structural cost by undertaking modified vessel geometry and rearrangement of malt handling equipment at different elevations as well as optimized brew house design.



Meura Hybrid Mash Filter in Operation

The major improvement with the Meura 2001 Hybrid lies in a conceptual change in its filter plate design. Previous internal research showed an irregularity in the sparging efficiency of the filter bed cakes. The reason was a different filling pattern from one cake to another. A solution was found by keeping only the filter bed that produced the best sparging efficiency.

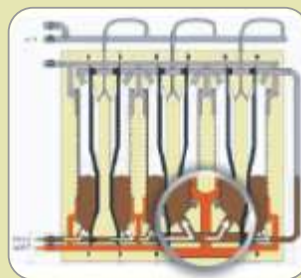
The Meura 2001 Hybrid was born, which has filter plates of one single identical design. The plate is now called the "hybrid" plate and no longer a "filter plate" or a "membrane plate". Each hybrid plate is equipped with one cloth AND one membrane (compared to previous versions of the Meura 2001 mash filter which had plates equipped with two membranes OR two cloths).

This leads to a wide range of advantages :

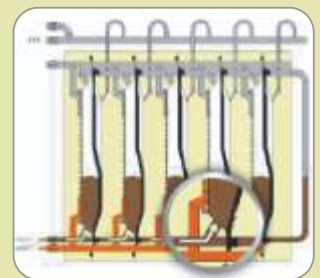
- Plates are filled with an improved regularity, thus with an optimal homogeneity of the cake.
- Shear forces during filling are further reduced, which improves the mash filterability.
- The wort quality is improved thanks to a reduced sparging ratio (below 2.2 l/kg while maintaining 100% of extraction yield).
- Thanks to the improved flow pattern, the filters can now be equipped with up to 160 plates (15.5 tons) compared to the previous filter equipped with maximum 65 chambers (12 tons).
- Reduced sparging time and thus shorter occupation time

All these advantages currently make the new Meura 2001 Hybrid the best and most efficient mash filter in the world!

Meura 2001 - Previous version



Meura 2001 Hybrid



Testimonial



"On behalf of Wave Management, I would like to express my sincere appreciation to PRAJ Industries for their excellent services and team efforts for providing us a turnkey Greenfield Brewery. This project execution was undertaken by PRAJ in most professional way and project got completed in record time.

This project is India's first and only project which has a capacity to produce 1 million cases / month in its first phase of operation, with biggest capacity glycol cooled Unitanks supplied in India.

Here, we will be producing Indigenous and International quality brands to enrich the Indian taste palate.

I wish PRAJ all the best for their all ongoing and future endeavors."

Raju Chaddha (Managing Director)
Wave Distilleries & Breweries Ltd, Aligarh, Uttar Pradesh

Resources

Manufacturing



PRAJ has modern manufacturing facilities near ports. Spread across about 2.0 lakh sq.ft. Covered area and about 350,000 sq.ft. Open area. To meet the aesthetic finish as per customer's requirements, we employ automatic polishing machines in our facilities for polishing of critical brewery equipments including tanks and vessels.

Highlights of fabrication machinery for high finish brewery equipment:

- Pulse TIG and Microprocessor controlled Orbital Welding Machines
- CNC Plasma Cutting Machines Column and Boom Automatic Plasma Arc Welding Machines
- Automatic Polishing Machine (Finish upto 400 grit)
- In-house pressing facility for Dish ends
- CNC Drilling Machine and VTL



Accredited with ISO 9001-2008, ASME (U, U2 & H) stamp and CE marking certifications, Global standards and codes include ASME Sec. VIII Div. I, ASME BPE, IS 2825, AD Merkblätter, PD 5500, TEMA, DIN and ASNI (SNT-TC-IA 1984 & 1988) are being followed at these facilities.

Stringent testing is carried out at various stages of procurement and production, as per international standards by PRAJ QA Team which follows the QA plan drawn for each project.

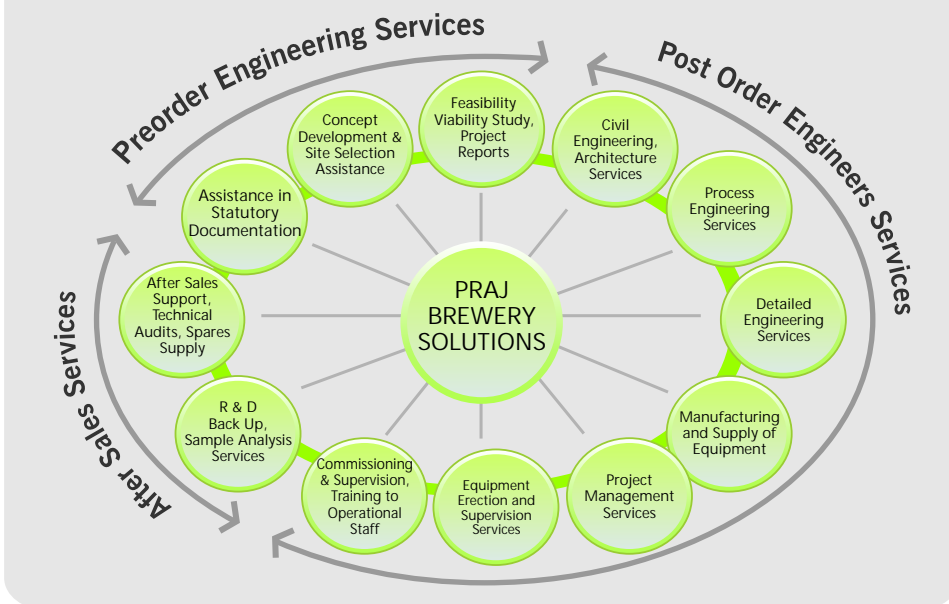
Research & Development

PRAJ MATRIX –The Innovation Centre

Certified by DSIR, Government of India Built on 5 Acre of land with a built up area of about 85,000 sq ft PRAJ Matrix-The Innovation Center has a State-of-the-art Beer Analysis Laboratory which follows EBC, ASBC and MEBAK Standards. This Center also has modern Pilot and Scale up facilities and Analysis facility from raw material to final product.



Services



Projects Update

- United Breweries Chamundi, Karnataka, India : **Greenfield Brewery**
- Iceberg Industries Limited, Bihar, India : Molson Coors Cobra India Limited; **First Brownfield Brewery expansion in India**
- Apollo Distilleries Private Limited, Tamil Nadu, India : **Greenfield Brewery**
- A M Breweries Private Limited, Tamil Nadu, India : **Greenfield Brewery**
- United Breweries Limited Kalyani, Kolkata, India : **Modernization & Expansion Project**
- SNJ Breweries Private Limited, Tamil Nadu, India : **Cellar Expansion.**

GLOBAL ALLIANCES



MEURA

HOLVRIEKA

Customer Voice

Arian Breweries & Distilleries Choupankhi, Rajasthan



Harit Sachdeva
(Director)

"This is to appreciate the team work and performance rendered by PRAJ Industries Ltd in accomplishing the stiff targets of erection and commissioning. The overall execution work was carried out in a very short span of time with space and mobility constraints. This all was possible with meticulous planning and total

committed approach to achieve the given target. The safety measures and work culture observed during the project tenure were found highly praise worthy."

Key Facts :

- Capacity : 250,000 HLPA to 650,000 HLPA
- Automated Brew house
- Optimized Brew house design

SNJ Breweries (P) Ltd., Chennai

"Working with PRAJ gives us confidence of timely, committed resources and deliveries. PRAJ extended us excellent preorder support and understood our requirements to offer most cost effective solution with competitive pricing, which suit our project viability. Their flexibility to work beyond own boundaries and to support customer helped us to streamline our plant operations efficiently".



V. Krishnan
CFO

Denzong Albrew (P) Limited, Mulukhey East Sikkim, India.



Denzong Albrew (P) Limited situated at Mulukhey, East Sikkim, India has started production of 'Kingfisher Beer' in technical collaboration with United Breweries Limited.

Mr. Kalyan Ganguly (President & Managing Director of United Breweries Ltd) along with Mr. Cedric Vaz (Executive Vice President - Manufacturing) & Mr. Rishi Mittal

(Managing Director - Denzong Albrew (P) Ltd inaugurated the plants. Mr. Ganguly highly appreciated the unit located in such a scenic area and its high technology. The unit is planned to have tourist destination.

The unit is a state of art modern brewery with fully automated processing plant.

Key Facts :

- Brewery capacity : 150000 HLPA to 300000 HLPA
- Optimized Brew house design

Photo Gallery



Apollo Breweries, Chennai



Mount Shivlik Breweries, Haryana



United Breweries, Rajasthan



Wave Distillery & Brewery, Uttar Pradesh



Privilege Breweries, Maharashtra



Mount Everest Breweries, Madhya Pradesh



United Breweries, Andhra Pradesh