DARLING PUMPS
Designing SMART pumping solutions...

Changing lives for better

SIMPLIFYING HOT WATER DEWATERING IN STEEL PLANTS

This case study is about the challenges faced by steel plant, where hot water pumping is inevitable. Add to that the coal dust, iron dust, ammonia, mud particles etc. which needs to be pumped with this hot water makes this task even more challenging.

Problem faced by Customer :

For any Steel Plant Hot Water Pumping is a part of its regular process. Generally surface mounted mono-bloc pumps are been used for pumping hot water. These pumps work well for limited time that too in cases where installation is of fixed nature & where water is relatively clear water.

In this particular plant in Western India, the challenge was to deploy pump for continuous duty for pumping Hot water mixed with coal dust, ammonia & solids. It had to be suitable for both fixed installation as well as portable installation. They tried to use traditional methods of monobloc pumps, but every few weeks, their was a breakdown as these pumps are not equipped to handle high temperature, high specific gravity water which was full of solids. This hampered their productivity to larger extend.

The only solution was to have reliable & sturdy pump which can stand good in these working conditions, i.e. pump liquid - with temp. 75°C, specific gravity 1.2, solid size up to 25 mm, has wear resistant material & can still provide trouble free service when operated on continuous basis.

DARLING PUMPS, WITH ITS EXTENSIVE KNOWLEDGE & EXPERTISE IN STEEL SECTOR WAS UP FOR THE CHALLENGE TO PROVIDE CUSTOMISED SOLUTIONS FOR THIS CLIENT…

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Solution Offered by Darling Pumps:

- Conducted site visits to understand exacting needs of this customer.
- Altogether new series of pumps was developed – **"HT Series".**
- Limited pump HP to 10 HP to make it more portable.
- Design & Developed a submersible motor which could withstand the liquid temperature of 80°C
- Developed a special impeller in dewatering series which could easily pump solids up to size of 25 mm
- Proposed special wear resistant hardened pump portion for longer hydraulic life
- All rubber parts were offered in Viton rubber
- Delivered final solution in form of product within 2 months from the date of order.
- Provided necessary initial assistance to install the pumps properly to make it a success.

Benefits to the customer:

- All in one solution for all their challenges.
- No more frequent breakdown of pumps. No more productivity loss due to break down of pumps
- Freedom to use pumps without any limitations, bet it portable installation or fixed installation.
- Lesser pump models, increased interchangeability, lesser spares consumption, lower maintenance cost.

Benefits of HT Series Pumps:

- Low installation cost, can be installed directly into the sump, no civil construction required.
- No drop in efficiency and performance over the period of time.
- Design for continuous duty.
- No coupling between pump & motor hence practically vibration free.
- Very lean design with lesser number of components providing longer operating life, but lesser minimum submergence.

Darling HT Series Pump

END RESULT – SOLUTION PROVIDED BY DARLING PUMPS IS ONE OF ITS KIND & HAS BEEN VERY WELL RECEIVED NOT ONLY WITH THIS STEEL PLANT, BUT WITH MANY OTHER STEEL PLANTS ACROSS THE COUNTRY.

Note: For more details about this case study, you can contact: +91-9981992833

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