

Belzona improves efficiency of cooling water circulation system centrifugal pump

ID: 9646

Industry: Chemical & Petrochemical

Customer Location: Shanghai, China

Application: CEP-Centrifugal Pumps

Application Date: May 2024

Substrate: Cast Iron

Products: Belzona 1111 (Super Metal), Belzona 1341 (Supermetalglide)

Problem

The centrifugal pump has been in service for more than ten years. The Customer wanted to repair the corroded area of the pump casing and impeller, and also explored ways to improve efficiency to achieve energy saving goals.



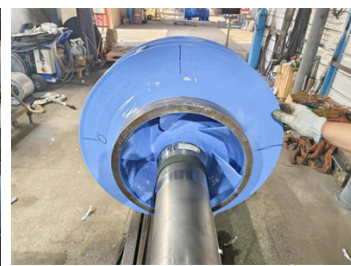
Degreasing and chamfering pump casing surface



Protection of matching surface before surface preparation



2 coatings of Belzona 1341 completed



Dynamic balancing test after the impeller is coated with Belzona 1341

Application Situation

Centrifugal pump, old pump, cooling circulating water, containing brine, normal temperature.

Application Method

The application was carried out in accordance with Belzona System Leaflet CEP-10. First, all sharp edges were grounded to give a radius of not less than 3 mm and the matching surfaces were protected. Then, grit blasting was performed. After cleaning, Belzona 1111 was used to repair and fill pits. Belzona 1341 coating was used for protection and efficiency improvement. After completion, the impeller was dynamically balanced.

Belzona Facts

Belzona 1341 can be used to improve pump efficiency. After using this solution, the Customer conducted energy consumption monitoring for 2 months and was highly satisfied with the results. The monitoring data after repairing one of the 5 pumps in the system: the power of a single pump was saved by 1.87%, and the flow of the entire system increased by 2.8%. After using this Belzona solution, the Customer found that it could save more than 100,000 RMB in energy consumption costs each year. According to the Customer's calculation, if the entire system is coated with energy-saving and efficiency-enhancing Belzona coatings, it can save more than 1 million RMB in energy consumption costs per year.

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