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Rebuild of Volute and Impellers:

The Following ThistleBond section is concerned with the rebuilding of eroded and corroded Volute and Impellers and should be read in conjunction with the Technical Data sheets of the following ThistleBond Products: Super Metal Rebuilding System, Extended Life Super Metal Rebuilding System, Ceramic Carbide Wearing Compound, Abrasion Resistant Ceramic Carbide Fluid.

COMMON DEFECTS

Pitting and Scarring on internal surfaces produced by prolonged periods of exposure to highly abrasive products, leading to a reduction in performance and efficiency. Without preventative maintenance or repair this can lead to scrapping of components.

PREPARATION

All work should be carried out in strict accordance with the relevant ThistleBond Technical Data Sheet. The product selection and application techniques should be based on the nature of the repair and the product being pumped.

SURFACE PREPARATION

The damaged components should be taken out of service and blast cleaned to **Swedish Std SA 2 1/2 ensuring a profile of 75 microns minimum using an angular grit**. This method of surface preparation will ensure a long lasting repair. After blasting, all damaged areas must be cleaned using ThistleBond Universal Cleaners.

APPLICATION TECHNIQUE

Impellers – Depending on the damage sustained by the impeller the user may have to rebuild entire areas of the component. This can be achieved by building layers of the ThistleBond repair paste onto the damaged area. In some cases steel plate may have to be welded onto the surface of the impeller prior to repair. Once the damaged impeller has been filled, allow the ThistleBond repair material to set. Please ensure to have read the correct technical data sheet to obtain the minimum and maximum overcoating times for repair material chosen. Once the ThistleBond product has set, apply to two coats of ThistleBond Abrasion resistant Ceramic Carbide Fluid over the entire surface of the impeller. The component should be left to fully cure before being put back into service.

Volute – Any areas of pitting and scarring must be filled in using the chosen ThistleBond repair material. For large damaged areas the product should be applied in thin layers, so to avoid any air entrapment. Once the product has reached its minimum overcoating time, apply two coats of ThistleBond Abrasion Resistant Ceramic Carbide

Fluid onto the entire surface of the Vollute to ensure maximum protection. The product should be left to fully cure before being put back into service.

TECHNICAL SUMMARY

PRODUCT	MACHINABLE	ABRASION RESISTANCE	WORKING LIFE (20C)	FULL CURE (20C)
SUPER METAL REBUILDING SYST	YES	GOOD	20 MINUTES	72 HOURS
EXTENDED LIFE SUPER METAL	YES	GOOD	20 MINUTES	72 HOURS
ABRASION RESISTANT CERAMIC FLUID	NO	EXCELLENT	30 MINUTES	5 DAYS
CERAMIC CARBIDE WEARING COMP	NO	EXCELLENT	25 MINUTES	5 DAYS