SA Hippo Flameproof Submersible Pumps Exported Has A 98% Local Content.

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The HIPPO Flameproof Submersible Slurry Pump Range which has been designed, developed and manufactured in South Africa has a minimum of 98% local content – with only the bearings and mechanical seals being imported.

All manufactured components for the HIPPO Pump Range have a 100% local content while all castings manufactured in South Africa and all the machining of the components is done in-house at the HAZLETON PUMPS manufacturing facility in Centurion.

The international market, and in particular Canada, has been the main source of clients requiring specialized pumping systems and in most cases, large volumes of acidic liquids containing solids are required to be pumped. This has led to the design, development and manufacture of exceptional large slurry submersible pumps which in most cases are the first of its kind in the world.

The development of large slurry submersible pumps to suite the international market requirements - to pump high volumes of acidic liquids containing solids at high heads - necessitated the establishment of a manufacturing facility in South Africa. To cater for the development of these new technologies HAZLETON PUMPS had to ensure that these large pumps would be manufactured economically to compete in the international market - the largest pump that has been produced weighed over 10 ton with the largest component weighing over 2.5 ton.

The first HIPPO High-Volume; Medium Voltage Slurry Submersible Pump produced at HAZLETON PUMPS manufacturing facility.

The first challenge was to find a reliable foundry capable of producing the required casting from Duplex Stainless and in particular Sanicro 28. The second challenge was to have these castings accurately machined to ensure interchangeability when replacement parts are required for maintenance.

With regards to the castings numerous foundries were found to be capable to produce large Duplex Stainless Steel castings, but no company in South Africa was found that was able to do the machining economically. Therefore, the only viable alternative for HAZLETON PUMPS was to set-up a machining facility to manufacture the pump components.

With limited funds the plan of action was to go to auctions where machines from large engineering firms that have closed down were for sale and with the down turn in the economy HAZLETON PUMPS was able to procure the required machines at affordable prices.

The next challenge to face was to adapt these machines to be able to manufacture pump components to the required standards. In order to ensure interchangeability of pump parts specialised machining jigs and fixtures were also developed.

Once the machining capabilities were successfully achieved the next step was the training of machine operators, since the products are highly specialised and have to adhere to very stringent standards i.e. being flameproof and that the machine operators had to be re-trained to adhere to these exact standards. Preference was given the recruitment of suitable, previously unemployed people from the nearby community to be trained as operators.

The techniques of machining of Duplex Stainless Steel also differ from the machining of standard materials. The main problem encountered is that this material “work-hardens” with every machining cut and therefore the casting has to be very close to the machining size so as to have the minimum amount of machining cuts during the machining process.

Duplex Stainless Steel Gland casting being machined in a lathe

Duplex Stainless Steel Discharge Head being machined in a horizontal Boring Mill

Duplex Stainless Steel Stator Housing weighing 2.5 Ton being machined in a Vertical Boring Mill

For more than 20 years HAZLETON PUMPS has been continuously awarded for the management of technology and use of innovation and in 2017 received the SASSDA Award for Manufacturing Excellence, as well as main two SEIFSA awards for both Product Innovation and Customer Service.

Although HAZLETON PUMPS has standard pumps in the HIPPO Slurry Pump range, the company specializes in designing pump systems to satisfy the specialised requirements of customers and in most cases specific pumps are designed to ensure the optimum results in the design of a pump system.