

LOCAL CERTIFICATION NOT ACCEPTED INTERNATIONALLY FORCES SA HIPPO TO SET UP COMPANIES IN CANADA AND USA.

In 1993 HAZLETON PUMPS designed, developed and manufactured the first HIPPO Flameproof Submersible Slurry pump be used underground in the South African coal mines. These pumps had to comply with the IEC 60097-1 regulations and certified by the SABS. As a result of the success of the HIPPO Flameproof Submersible Slurry pump being exhibited at the Electra-Mining Exhibition in 1994, as well as every subsequent show, HAZLETON PUMPS received several enquiries from international mining clients.

The HIPPO Flameproof Submersible Slurry Pump Range which is designed, developed and manufactured in South Africa has a minimum of 98% local content, with only the bearings and mechanical seals being imported while all the manufactured components for the HIPPO Pump Range have a 100% local content since all castings are manufactured in South Africa and all the machining of the components is done in-house at the HAZLETON PUMPS manufacturing facility in Centurion.

The HIPPO Flameproof Submersible Slurry pump range is regarded as the safest pumps in the world as HAZLETON PUMPS developed specialized protective features:

- 1 All the HIPPO Flameproof Submersible Slurry pumps can run continuously as the stator housing is filled with oil dissipating the heat from the electrical winding ensuring that the stator winding would never burn out due to overheating. The oil in the stator housing has the additional benefit of lubricating the seals and bearings and in case of failure of the mechanical seals the contamination of the oil is detected by thermistor relays and before the liquid being pumped comes into contact with the electrical winding of the pump the pump is switched off.
- 2 To protect flameproof submersible pumps, it is also essential to have a flameproof electrical control panel installed as close as possible to the pump. The control panel needs to firstly have overload protection, secondly a sensing device to measure when the mechanical seals should fail and thirdly a relay suited to the thermistors to prevent the electrical winding overheating.

- 3 Any possible electrical flash inside the pump enclosure, when using Medium/High Voltage submersible pumps are used in areas where flammable gasses might be present, is prevented by having the pump enclosure under vacuum pressure and monitored by means of a pressure transmitter.

When HAZLETON PUMPS exported the first HIPPO Flameproof Medium-High Voltage; High Volume; Submersible Slurry Pump to Canada in 2003 many challenges and had to be overcame. The main challenge was that the South African certification done on these pumps was not accepted by the Canadian Standards Association (CSA)

The main requirement to export a flameproof product to Canada is that the products have to comply with the IEC 60097-1 regulations and be certified by an international accredited inspection authority. With the HIPPO Flameproof Submersible Slurry pump having been certified by the SABS and having the right to display the SABS mark it was expected that CSA would accept the SABS accreditation.

The first HIPPO Flameproof Medium-High Voltage; High Volume; Submersible Slurry Pump was exported to the Oil Sands Mines in Fort McMurray, Alberta, Canada and on having the certification documentation inspected the CSA informed HAZLETON PUMPS that the SABS certification is not internationally recognised.



The HAZLETON PUMPS team with two HIPPO Flameproof Medium-High Voltage; High Volume; Submersible Slurry Pumps

Consequently, HAZLETON PUMPS had to pay about R 30 000.00 (CAD 3 000.00) and the delivery of the pump to the client was delayed by two weeks while the CSA carried out the required inspection on the HIPPO Flameproof Submersible Slurry pump. The CSA accepted that the pumps did comply with the IEC 60079-1 specifications and the pumps as successfully installed and still operating to date.

In order to get the SABS accepted as an international inspection authority in accordance with the IEC 60079-1 specifications HAZLETON PUMPS had numerous meetings over the past 15 years with the SABS. Various other institutions and associations like the South African Department of Trade and Industries (the dti); the Gauteng Growth and Development Agency (GGDA); The South African Capital Export Equipment Council (SACEEC) and the South African Flameproof Association (SAFA) was also lobbied without any success and to date the SABS is still not recognised as an internationally accepted inspection and certification authority.

The HIPPO Flameproof Submersible Slurry pump range has also been exported to the USA; most recently to a refinery, TARGA RESOURCES, from Houston, Texas with the same challenges with regards to certification as that being experienced when exporting to Canada.

The second challenge to overcome when manufacturing the submersible slurry pumps for Canada and the USA is the power supply operates at a frequency of 60Hz compared to the 50Hz required in South Africa. The pump therefore rotates at a higher speed in Canada and the USA. With most pumps designated for use in the Canada and the USA, where 60Hz power is required, most of the submersible pumps required being high volume applications and the power source must be Medium/High Voltage the client would insist on having the pump performance tested at 60Hz power supply.

The SABS pump test facility has the capability and capacity to do the Medium/High Voltage pump testing but since the SABS certification is not internationally recognised the tests done at this test facility would not be acceptable when exporting. HAZLETON PUMPS therefore approached the Sulzer Pumps test facility in Elandsfontein which has the capability to do the required tests and certification which is internationally accepted. All HIPPO Flameproof Medium-High Voltage; High Volume; Submersible Slurry Pump are witness tested at the Sulzer Pumps test facility.



The HIPPO Flameproof Medium-High Voltage; High Volume; Submersible Slurry Pumps being tested at SULZER PUMPS test facility

The HIPPO submersible slurry pump range is regarded as the safest and most reliable pump range in the world. With the certification of the electric products and in particular flameproof products not being recognised in Canada and the USA as well as that the pumps have to operate on a 60Hz power supply the decision was taken to export the submersible pumps in kit-form to Canada and the USA and have the electrical winding produced in Canada and the USA then have the assembly and testing done there as well.



The SULZER PUMPS team after successfully testing a HIPPO Flameproof Medium-High Voltage; High Volume; Submersible Slurry Pumps

In order to grow the sales of the HIPPO slurry submersible pumps Hazleton Pumps has set up companies in Canada and the USA as both these countries do not levy duties on pumps produced in South Africa. HAZLETON PUMPS exports the HIPPO Submersible Slurry Pumps in a kit form to be assembled and tested there. The main advantage is that the pumps will only be needed to be certified in Canada and the USA and would be exported without South African certification.

Since the certification of electrical products produced in South Africa not being accepted internationally has a major effect on the manufacturing capabilities of South African producers a drastic plan of action has to be put in place to address this unacceptable situation and get the SABS to be accredited for international acceptance. The problem local certification not being accepted internationally is a major limitation and which prevents direct exports and, in turn, has an influence on local job creation and growth of the economy.