

**Enriching Lives** 

# Reverse Engineshing After Market Business



SERVICES@KIRLOSKAR.CO.TH
WWW.KIRLOSKARTHAILAND.COM

TEL: +66 2 661 8272-4,+66 2 026 3585 +66 83 936 9665, +66 90 587 8307











#### Reverse Engineering

KIRLOSKAR BROTHERS (THAILAND) LIMITED (KBTL) IS SUBSIDIARY OF KIRLOSKAR BROTHERS LIMITED (KBL), INDIA.

KBL provides complete fluid management solutions for large infrastructure projects in the areas of water supply, power plants, irrigation, oil & gas, chemical, firefighting, industry and marine & defense. We engineer and manufacture industrial, agriculture & domestic pumps, valves and hydro turbines.

Often, customers face difficulties in finding replacement parts for their old or obsolete pumps or where the original equipment manufacturer cannot be located. Even if available, the delivery time or commercial term for such parts is really unfavorable all times. KBTL can re-engineer and manufacture non-KBTL parts to show our capabilities provide a suitable sustainable and reliable alternative solution with the best-in-class service assurance which is a benchmark of Team KBTL.

KBTL state of the art service center in Amata offers technology and capabilities to deliver fast and integrated solutions to bring pumps back to OEM specification. We have fully equipped service trucks with experienced staffed with our trained, well knowledge & qualified service engineers as well technicians to provide you high quality aftermarket service, upgrade to repair or rebuild OEM and non-OEM any type of centrifugal pumps and pumping system with our customers in Oil & Gas, Power Sector, Steel, Water, Building & Construction, Heavy Industries and Chemical Industries.

Total commitment to safety and quality.



# REVERSE ENGINEERING



KBTL a special focus on reverse engineering technology. We have dedicated state-of-the-art facilities duly backed by our experienced and skilled professional engineers to offer you model solutions with customised exactly as per your requirements.

We are the only pump manufacturer to have a dedicated 3D printing machine, which helps us to replicate a part or create a product prototype to a high degree of accuracy. The parts or product may be turned or cast, a process which is critical in reverse engineering. For casting, we have Replicast®, a precision foundryprocess that enablesan improved product finish and reduces the overall costs.Our dedicated Replicast team works closely with our engineering team to ensure 100% precision. With such technological capabilities, we are wellequipped to re-engineer pumps and valves of any age and manufacturer.

## WHY REVERSE ENGINEERING?

- Reverse Engineering can be applied in cases where either the old pump details are not available, the OEM is not traceable or it is an obsolete pump model from some other manufacturer. Many imported pumps having exorbitant prices to the customer, in such cases, often keeps searching for the indigenous source.
- Amidst the persisting COVID-19 pandemic situation, many customers are hesitating to order materials from overseas.
- Thus, reverse engineering is also an integral step towards boosting the OEM spares replica to fit with exiting pump to achieve to desired original supplied pump performance and durability with improvement of MTFB of the pump life.
- KBTL reverse engineering proven quality as well as warranty with equipment under KBTL expertise to increase MTBF of the equipment with attractive & competitive price for their imported pumps.





## **BENEFITS OF Reverse engineering**



NON-KBL MAKE R55 MOC PUMP MODEL - 125-80- 250 SCANNED WITH 3D PRINTER WORN OUT R55 IMPELLER

- Reverse engineering is a long-term solution.
- We have a well-equipped Sales and Service team to support our valued end users in SE Asia Our infrastructure is in place, with KBTL being home to the world's biggest 3D printing machine.
- Lead time is an added advantage for us
- Optimal cost-effective solution.
- We can produce parts for all API, Non API pumps with MOC from Cast Iron to Super Duplex.
- We are capable of casting R55, Alloy20 and other grade of super ritical MOCs in house which is rarest among the pump manufacturers across the globe.

- KBTL having the largest 3D printing machine available in house at main manufacturing plant.
- KBTL having state of art CNC machine shop including Asia's largest vertical turret lathe machine and other machines available with us.
- Expertise in CFD analysis with professional R&D team.
- We are having Asia's largest hydraulic research lab. Well equipped Sales and Service team to give support to our esteemed customers.



### VALUE ADDED SERVICE

- 3D Printing machine
- CFD analysis
- Lowest life cycle cost series (LLC) of pumps
- Energy Audit Service at site
- Critical MOCs pumps and parts
- Pumps performance test
- Pumps monitoring with IOT Solutions
- Genuine spares
- Service support 24X7 round the clock

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