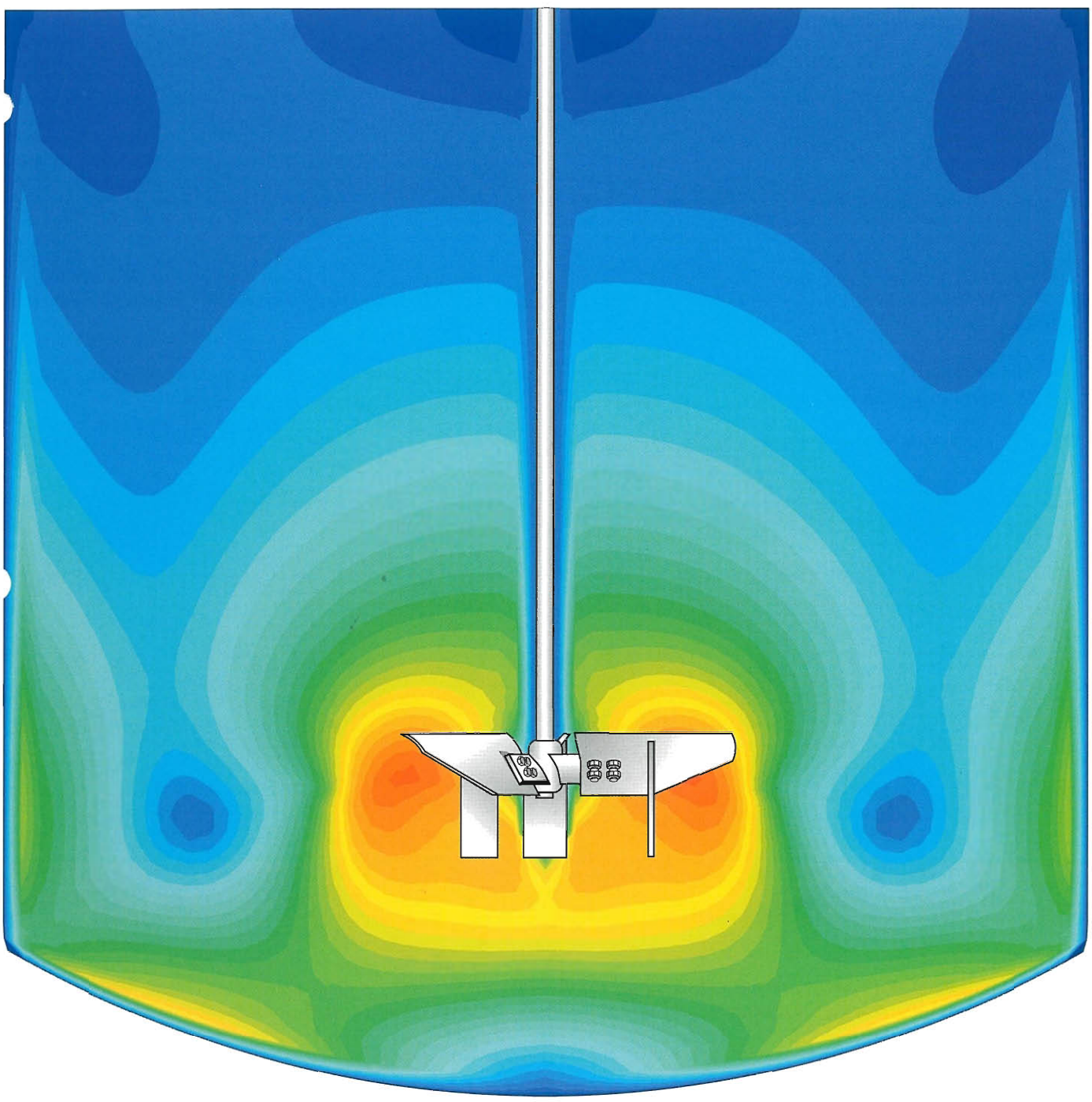
MIXTEC

FLUID MIXING TECHNOLOGY



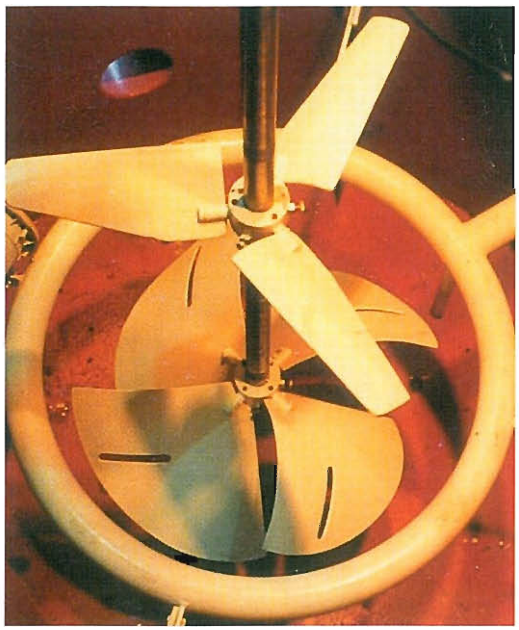
RESEARCH AND DEVELOPMENT: key to good mixing practice

Mixtec's constant research and development programme policy has been the key to continued growth by providing the technology to improve designs and engineered products.

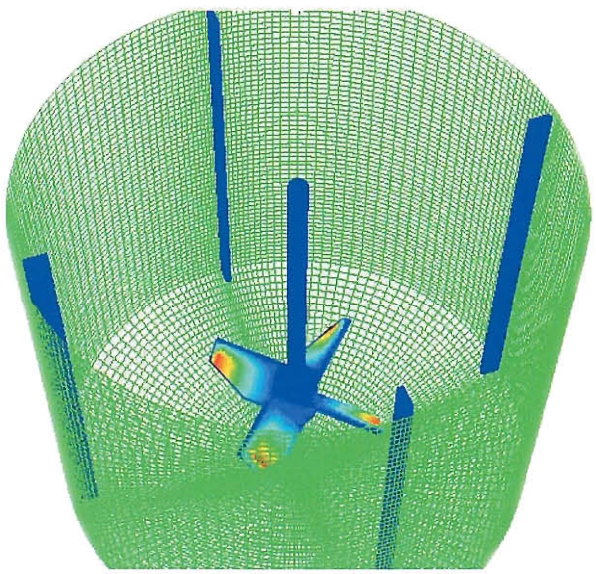
Mixtec Fluid Mixing Laboratory.

Our laboratory techniques can guide you in the correct selection for your mixing equipment and our application engineers can help you in the design of your tank including special fittings such as anti-vortex baffles, mounting structures, heating coils, gas sparge rings and other in-tank equipment.

Where Mixtec is entrusted with the design of the equipment we will guarantee not only the mechanical components but also the process response, and if you are still not satisfied we offer a money back guarantee.



Bacterial Oxidation Test Tank.

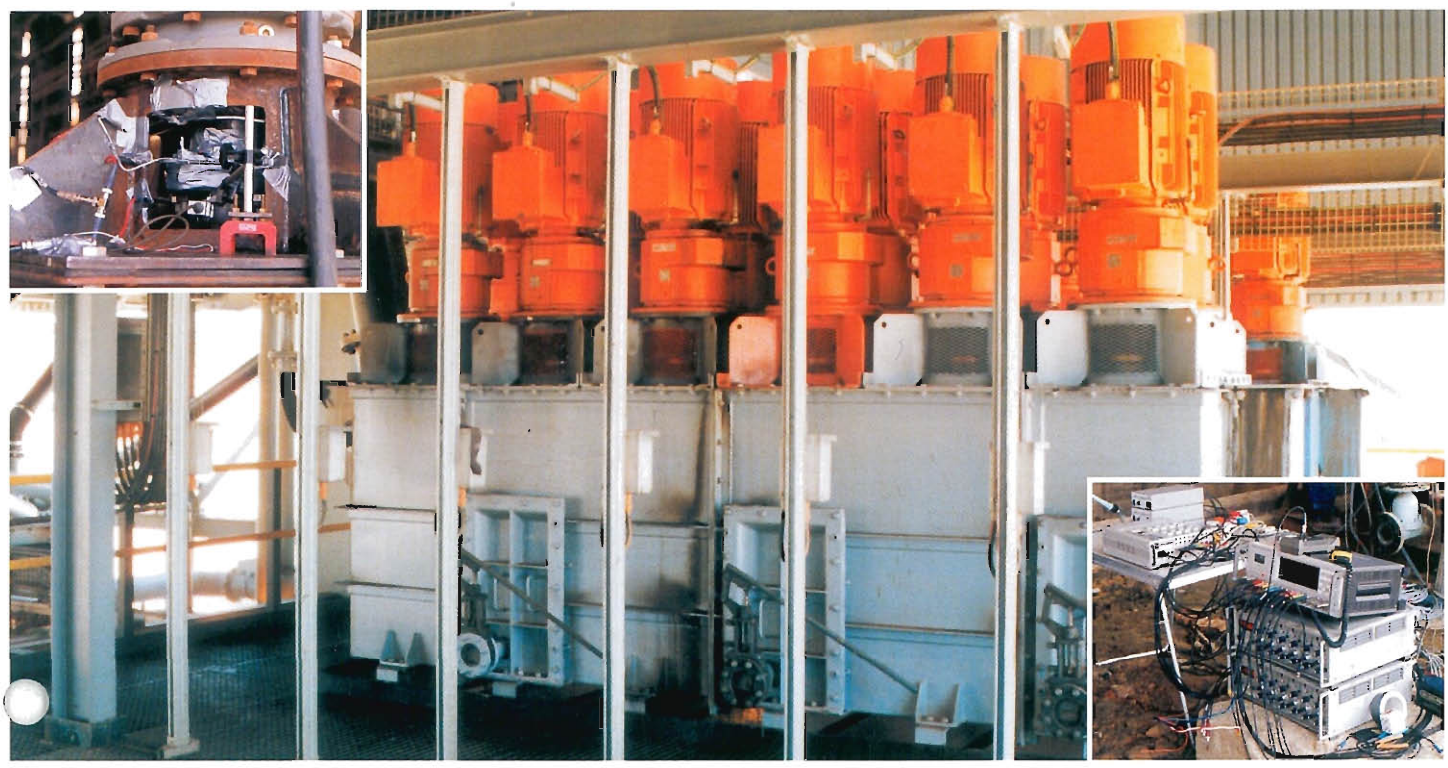


Virtual Mixer Modelling

Laser Doppler Laboratory measuring equipment combined with CFD (Computation Fluid Dynamics), telemetric on line analysis and finite element analysis are some of the tools used to produce state of the art mixing technology for better, more efficient mixers.

CFD is the collection numerical methods for simulating and modelling of fluid flow phenomena, heat transfer and chemical reaction. A solution is obtained by solving the conservation equations for mass, momentum, energy and chemical species by using finite difference method.

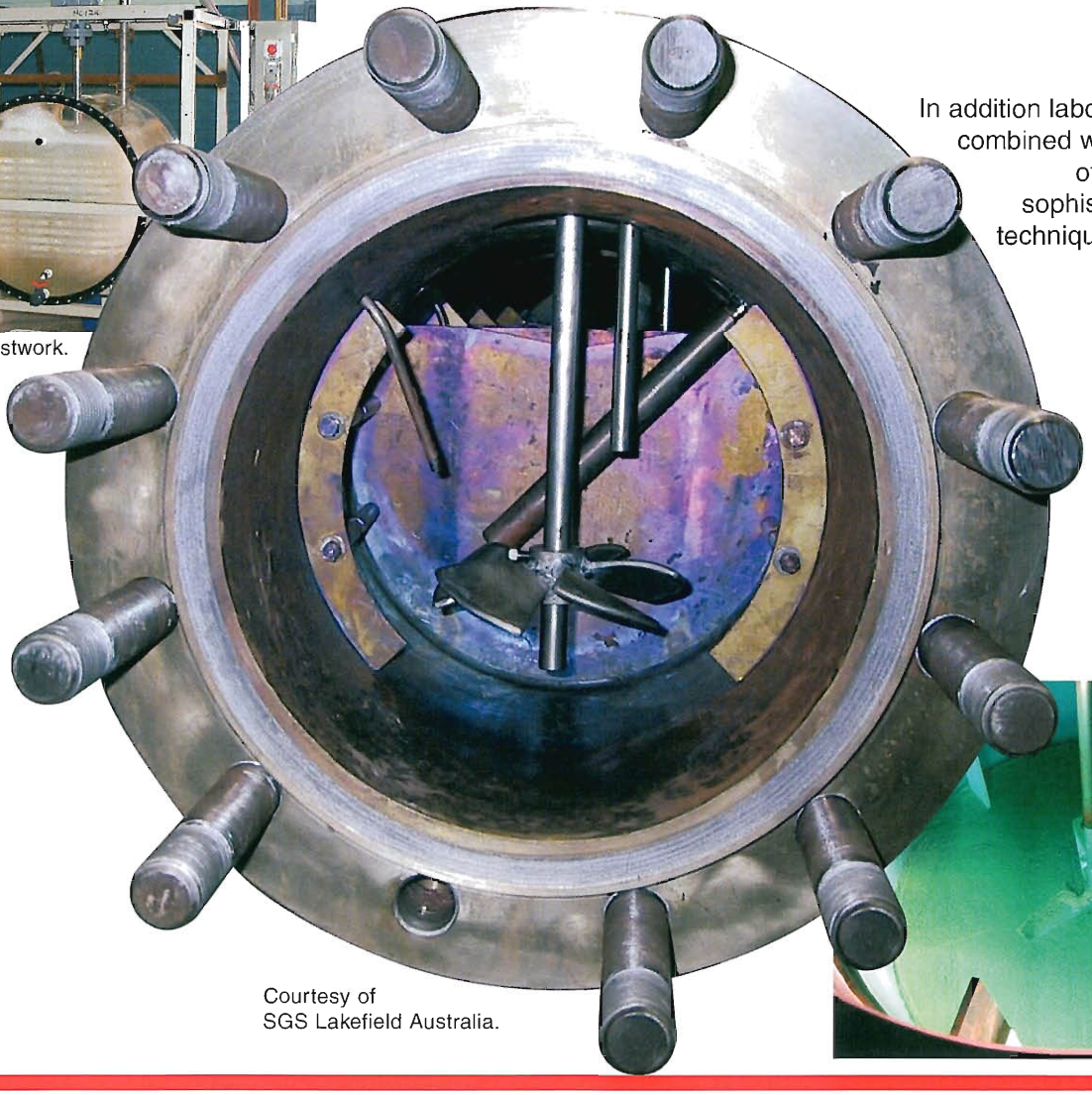
ONSITE PILOT SCALE TESTWORK: optimising process response



900kW High Energy Attrition Cells.

Autoclave Testwork.

In addition laboratory results are combined with on site testing of large units using sophisticated telemetric techniques to confirm this information.

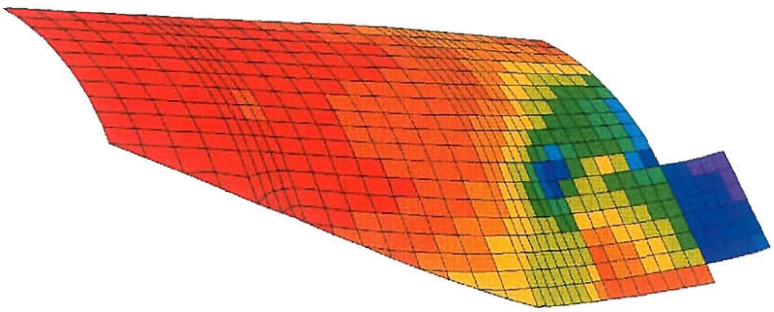


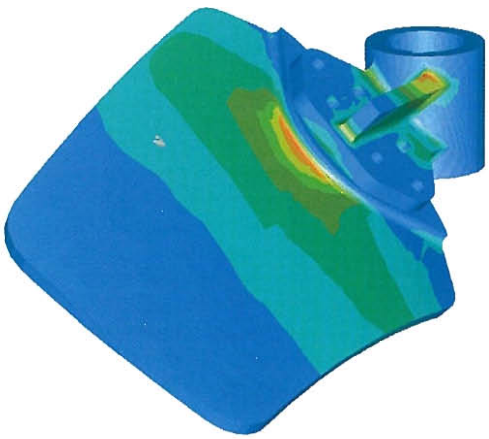
Courtesy of
SGS Lakefield Australia.

Copper Oxide Leach.

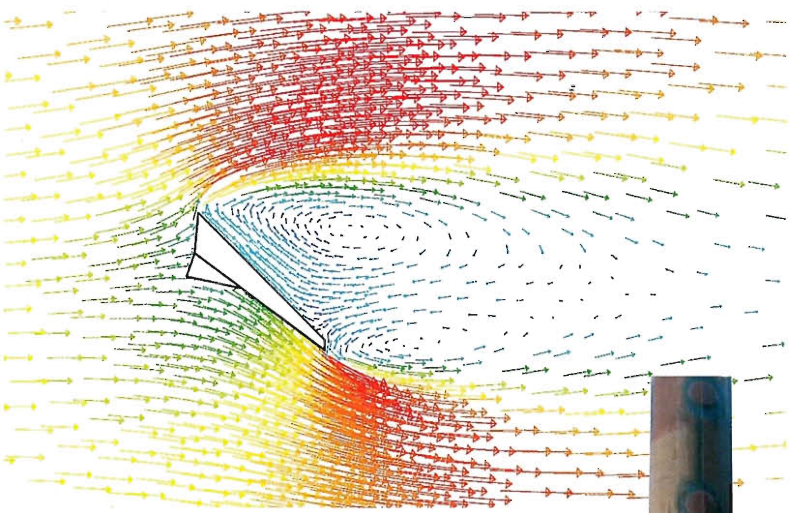
IMPELLER TECHNOLOGY AND DESIGN: for high efficiency and productivity

Getting the facts on fluid behaviour and mixer scale up is just the start. Mixtec have experienced application engineers who can turn this information in to reliable designs - first time every time and give it a process guarantee.





Mixtec's In house computer programmes have been developed through many years of rigorous research. Factors and constants generated from testwork and tempered with experience are incorporated into the Mixtec computer programmes ensuring that a reliable conservative design is produced not only to work on the day it was installed but also for many years of productive life.

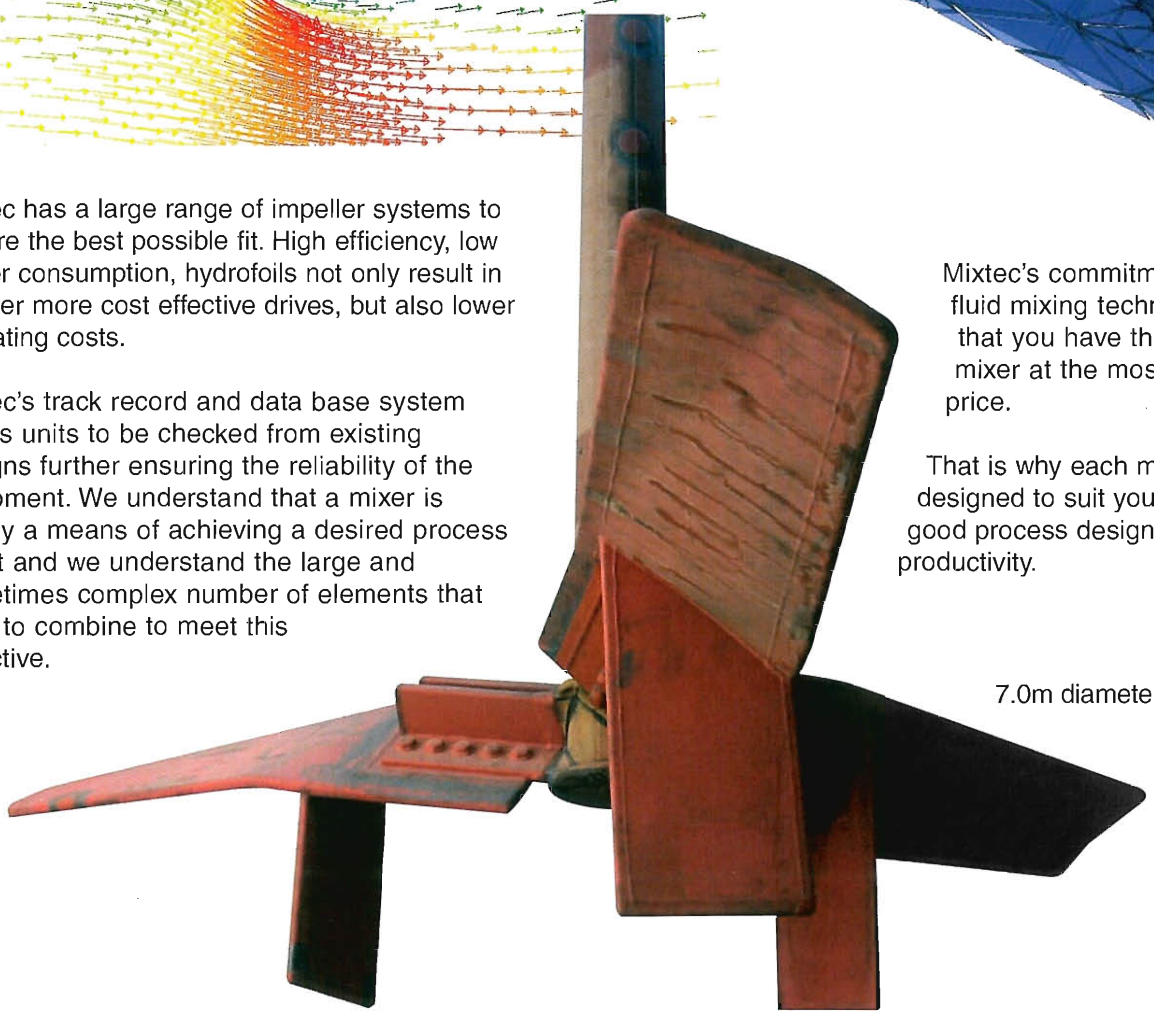


Mixtec has a large range of impeller systems to ensure the best possible fit. High efficiency, low power consumption, hydrofoils not only result in smaller more cost effective drives, but also lower operating costs.

Mixtec's track record and data base system allows units to be checked from existing designs further ensuring the reliability of the equipment. We understand that a mixer is simply a means of achieving a desired process result and we understand the large and sometimes complex number of elements that have to combine to meet this objective.

Mixtec's commitment to providing fluid mixing technology ensures that you have the best possible mixer at the most economical price.

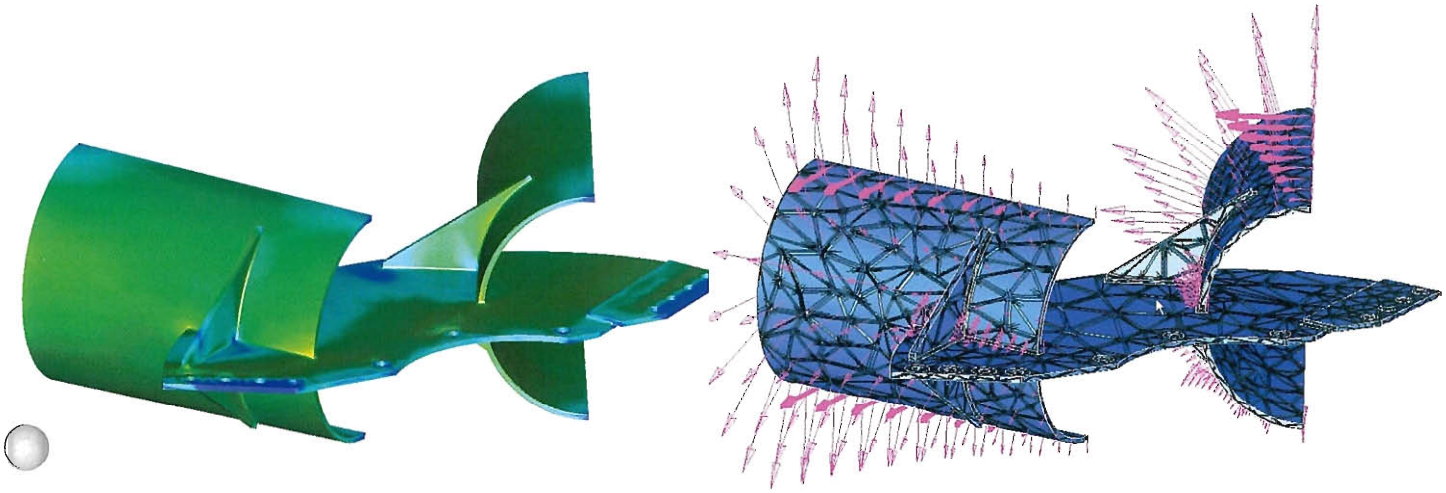
That is why each mixer is custom designed to suit your process and a good process design ensures productivity.



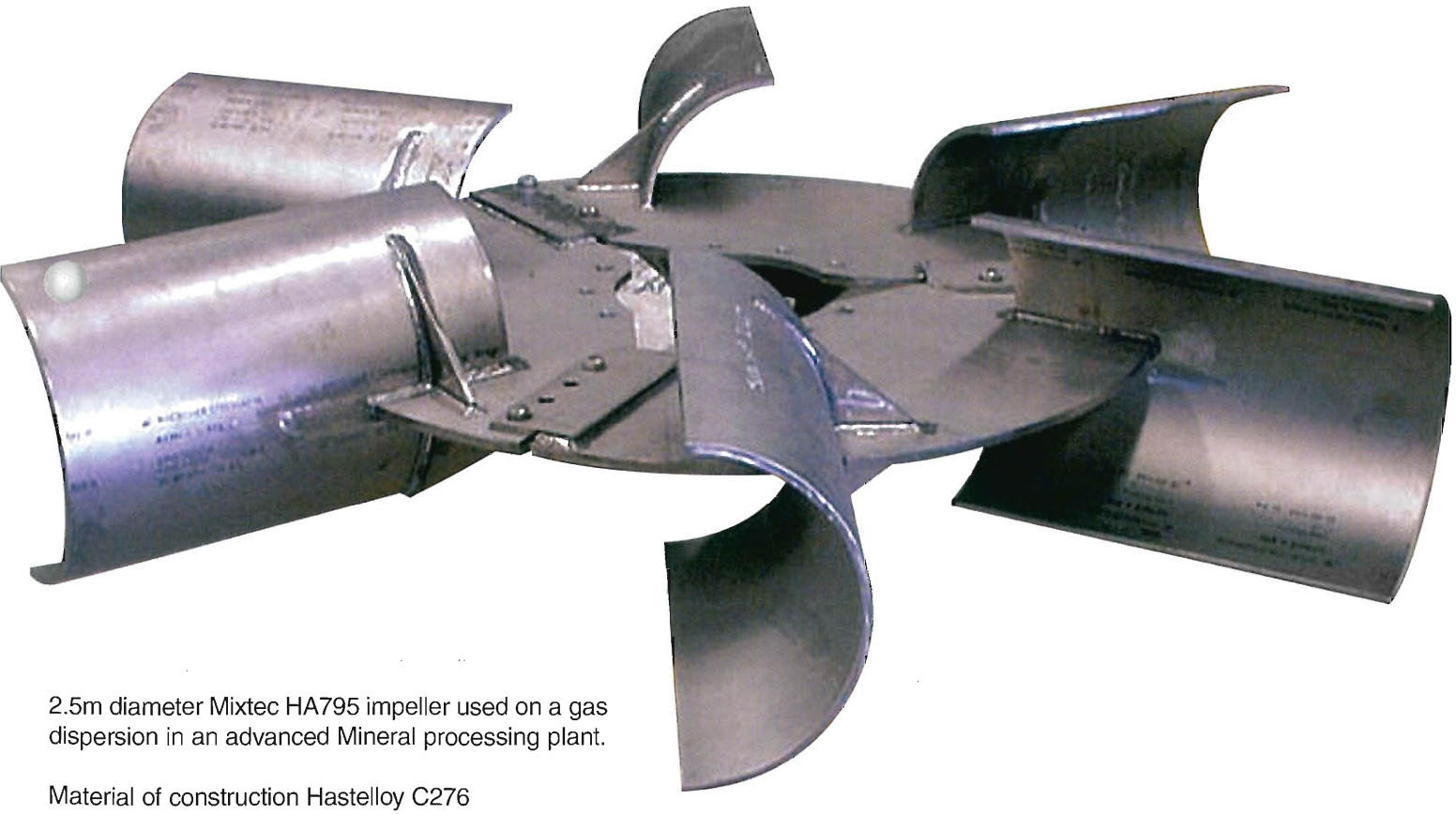
7.0m diameter HA715

All mixing applications are different and each has its own unique engineering problems. Understanding these problems takes experience and solving them demands technology of the highest standard.

Extensive use has been made of finite element analysis on the design of high stress components, such as the impeller and the coupling, to ensure maximum reliability at minimum cost.



The impeller is subjected to the calculated loads and stresses that it will experience in operation and using advanced software and processor platforms the analysis is computed to identify any potential areas of weakness or stress build up.



2.5m diameter Mixtec HA795 impeller used on a gas dispersion in an advanced Mineral processing plant.

Material of construction Hastelloy C276

MIXER ENGINEERING AND MANUFACTURE: Built to last - Guaranteed to perform

The best research, design and engineering will mean nothing if it is not built right. That's why Mixtec's modern fabrication methods and inspection procedures to the latest international standards and state of the art machine tools such as CNC equipment, provide the tolerances for accurate alignment and a precision made product.

From simple baseplate mounted units to sophisticated high pressure reactor designs incorporating double mechanical seals, Mixtec has manufactured them all.

Mixing systems in excess of 15 tons have been manufactured with impellers over 6.0m in diameter and shafts lengths over 20m.

Materials of construction are not limited to ferrous and non ferrous metals but also include a wide range of coatings as well as plastics and FRP products.

250kW Series 4000 Drives

QUALITY STATEMENT

Mixtec's company objective is to be highly regarded for the excellence of its service, products and people in the fulfilment of its responsibilities to customers, suppliers, community and employees.

Mixtec believes that these objectives can be met by responding to customers needs before, during and after each sale.

The management of Mixtec is unreservedly committed to ensuring that consistent quality standards are maintained through out every aspect of the companies products and services.

Precision manufactured drives for long life higher efficiency and greater load carrying capacity. Large output shafts ensure trouble free operation.

Drive housings are engineered to with-stand the static and dynamic loading generated during the operation of the mixer.

Large agitation shafts ensure trouble free operation. Demanding mixing applications require innovative mixing solutions. Large agitator shafts give a more stable operation reducing mechanical shock.

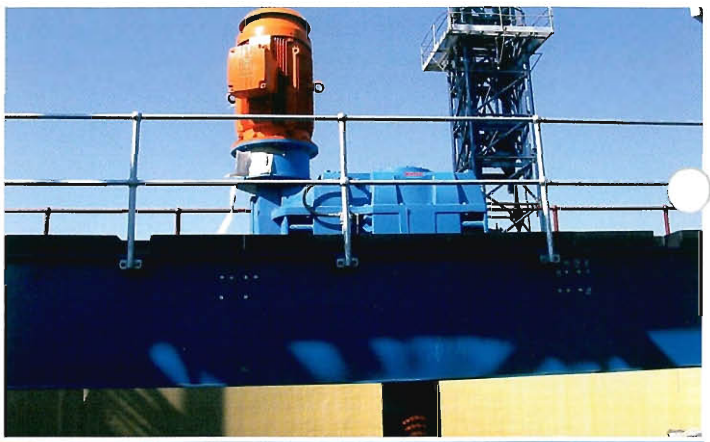
INSTALLATIONS: Giving you customer satisfaction

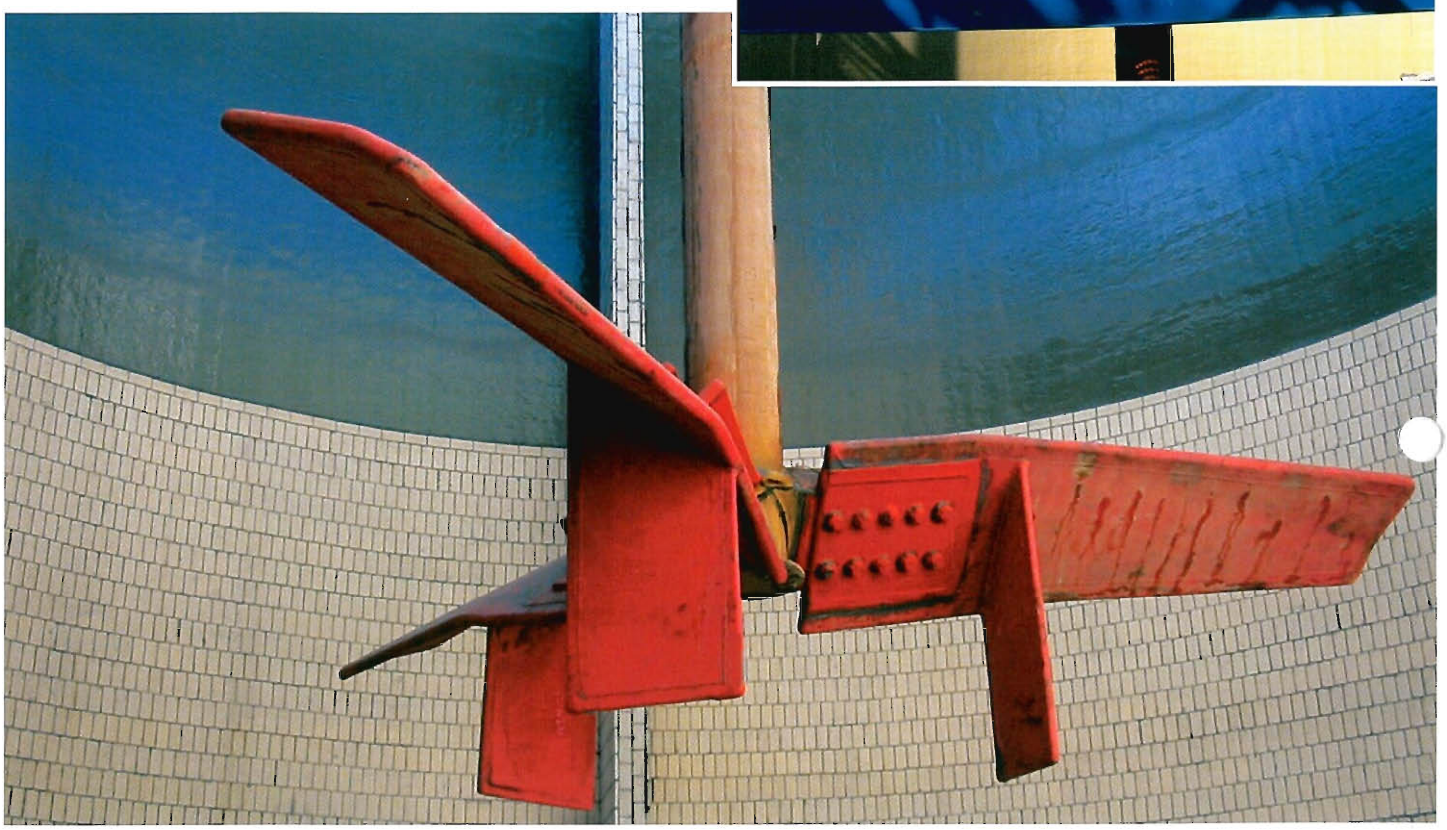
Mixtec equipment is used at altitudes up to 5000m in the Andes to 3000m below sea level in backfill applications in some of South Africa's deepest mines. Environmental conditions vary from temperatures as low as minus 40°C to plus 40°C as metallurgical plant operates in more remote areas.

From simple open tank applications to sophisticated pressure leach autoclaves Mixtec not only has the experience and equipment for the job but the track record in these and numerous other applications.

Mixing equipment is our business. In addition to mechanical agitators Mixtec has also developed a range of jet and in-line motionless mixers. Jet mixers have been used up to 400mm diameter for 9000m3 petroleum blending and static mixers are manufactured in our standard range from 15mm to 1000mm diameters.

Consulting services are also available. By working with you as part of your team to optimise your process results, our people are here to help you to formulate or review specifications. We can test existing mixer systems and recommend improvements. We can train your operating staff and maintenance engineers on correct mixing procedures thereby avoiding costly mistakes in the field and we can modify damaged or broken equipment to ensure better productivity. In short there is no other mixer supplier that makes fluid mixing technology so freely available.





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