## Service Center Pump Maintenance Programs Result in

LADSSac GOST at CLOSS IN DOWNTH CHOSS IN CHEMICS CONSTITUTION STATE OF THE Service Cenbeen demonstrated to reduce customers. Nepair costs as well as improve cryogenic pump reliability. Safety is also maximized by the right of the comminimum.

orous quality control and testing performed on each repair.

Different types of programs are available to provide a best Î Úİ for a customeris maintenance requirements. For example, the Service Centers offer an exchange program with either complete pumps or maior subassemblies (warm or cold ends) immediately available on

major subassemblies (warm or cold ends) immediately available on an exchange basis. This exchange program provides a cost-effective, regularly-scheduled standard maintenance, to head off potential problems, disruption of production schedules and possible downtime, and

to help extend the life of a pump.



: Cost effective

Less than 24 hour delivery

; Replacement schedules

; Extensive Spare parts inventory

; Service is guaranteed

; Cryogenic equipment repairs

; 90 daywarrantyon exchanged items



Maintenance contracts (service agreements) are another option offered. These contracts include quarterly reports which provide repair costs and histories, as well as any recommendations of service. Customprograms can be designed to achieve the most Úexibility and lowest cost for a given situation



Repair costs are reduced by returning the pump to original factory specifications and performance, then keeping it in that condition in amaintenance program. Not only are the direct repair costs reduced, but indirect costs due to poor pump performance and lack of availability are also significantly reduced.

The Service Centers strive to maintain a consistently high level of quality in all repairs. Quality control measures and tools in place to accomplish this include:

Factorytraining and support for technicians

Computer monitors at work stations which display the latest revition using heliumlight band technology for verifying Ûatness of seal mating surfaces to at least 35 millionths (.000035) of an inch

Specialized deaning equipment including vapor degreasers and ultrasonic deaners

All hand measurement tools (such as micrometers) are calibrated annually

¡ Completed assemblies are pressure tested for leakage

Where applicable, seal leakage rates are checked for ex-



	pump with a bar-coded serial number with which to track the pump. The pumpiñ repair history with costs is then recorded for effective equipment management by the customer.  Service centers are located at the major base of customer locations in
	keymarket areas around the globe, allowing us to service our products
Customers are also provided with tools to view and compare repair costs and trends. To achieve this, the Service Centers provide each	