



# Overnight high-voltage motor repair reduces downtime from 7 days to 24 hours

## The challenge

In the oil and gas industry, any downtime can be costly, especially if it involves a large piece of production equipment, such as a compressor. For one Sulzer customer, having a spare motor was part of their backup solution. But the motor needed an overnight modification to the exciter to ensure the plant could restart the next day.

Customers that operate around-the-clock need field service support 24/7. Even with the best-planned maintenance regime, sometimes the unexpected happens and a repair needs to be completed quickly. In this case, the call came in at 1:00 a.m., with a report of an 11,000 hp (8,200 kW) synchronous motor driving a reciprocating compressor that needed attention.

Sulzer's relationship with this site included field service support and they were holding a spare motor for this application. However, due to the size and complexity of the installation, the change-out time for the spare motor would be around seven days, which would incur significant production losses. Sulzer decided to use the exciter assembly from the spare motor in order to keep the downtime to a minimum.





The modified exciter assembly was ready within 24 hours of the request for support from the customer



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## The solution

Field service engineers from Sulzer's Orange, TX Service Center completed an initial onsite inspection of the exciter assembly. They found that the two motors were not quite identical and some of the parts would need to be modified because they had different bolt centers. To quickly adapt the design, the replacement exciter assembly was sent to Sulzer's Pasadena Service Center where it arrived at 6:30 p.m.

The engineering group, which had been made aware of the situation, went to work on developing a solution overnight. The customer arrived in Pasadena at 10:30 p.m. to see if any progress had been made and was ecstatic to see that the job was almost complete.

By 11:30 p.m. the new parts were ready for shipment back to the site. Once they arrived, the installation and commissioning were completed early the next day by the field service team. Sulzer then made the repairs to the damaged parts, brought the motor in storage back to operational status and reinstated the unit in the field.

## Customer benefit

As part of the project, the customer asked Sulzer to assess the cause of the exciter failure to try and avoid a similar incident in the future. The investigation showed that the motor had been overloaded during startup. The customer therefore requested Sulzer to build another complete exciter assembly for the motor in service as a spare part to reduce the downtime in the event of a similar incident.

Marcin Chojnacki, Pasadena Service Center Manager, comments: "The Sulzer network of service centers always work together to ensure the quickest solution for the customer. With such a wide range of in-house facilities and resources, overnight repairs can often be delivered when time is of the essence."

In addition to round-the-clock engineering support for synchronous exciter assemblies, Sulzer can respond quickly to any electro mechanical emergency, with 180 manufacturing and service facilities worldwide.