

# Highly-Efficient tiger claws ensures secure drilling

## RESULTS

- Provided a highly-flexible and efficient solution using fieldbus technology
- Adapted the seawater-resistant cylinders to meet the specific requirements of the project
- Increased efficiency, reduced costs, and ensured operator safety



## APPLICATION

Drill rigs

## CUSTOMER

Honghua Group, Chengdu, China

## CHALLENGE

Headquartered in Chengdu, Sichuan, the Honghua Group is a large-scale equipment manufacturer and provider of drilling services. The largest exporter of drilling rigs in China—and one of the biggest land drilling rig manufacturers in the world—Honghua specializes in researching, designing, manufacturing, and pre-assembling drilling rigs for offshore engineering, oil and gas exploration, and production facilities.

Like many projects in the Chinese industrial sector, the Honghua's main objectives are to keep efficiency up and costs down, while ensuring safety. As the drill head on the offshore drillship penetrates new depths, workers keep adding new sections to the pipe above water. Even when the ocean is choppy, the sections cannot move uncontrolled, being securely stored at all times. Honghua required a highly-flexible and efficient pneumatics solution to deliver the right functionality while ensuring operator safety.

*“The wide spectrum of electrically actuated valves from Emerson provides support for numerous communications protocols. Honghua was able to implement a highly flexible and efficient solution using fieldbus technology.”*

**Lin Hao**

Emerson Sales Engineer for Honghua Group

### SOLUTION

Like the claws of a tiger, pneumatically actuated clamping fingers maintain a secure grip on the pipe sections, even in stormy weather. Approximately 350 seawater-resistant AVENTICS™ pneumatic cylinders actuate these claws to hold sections that are stored on deck. Working from the cabin, the crew leader in the tower releases the parts one by one and grips the new sections. The related commands are transmitted via fieldbus to the pneumatic valves in two control cabinets, which then move the cylinders.

“The wide spectrum of electrically actuated AVENTICS valves from Emerson provides support for numerous communications protocols,” explains Lin Hao, the Emerson sales engineer supervising the project in China. “Honghua was able to implement a highly flexible and efficient solution using fieldbus technology.”

Based on decades of experience outfitting deep-sea vessels, Emerson adapted the seawater-resistant cylinders to meet the specific requirements of the project, ensuring their ability to supply the necessary force.

“With the Tiger project, we have once again proven that we are the leading systems supplier for tailored offshore pneumatics solutions in China,” says Lin Hao.

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**Lin Hao**

Emerson Sales Engineer for Honghua Group



*The first offshore drillship from China with pneumatics from Emerson's AVENTICS.*

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