CASE STUDY

### HITACHI Inspire the Next

## PMI-MASTER Pro2



### **OBJECTIVES**

- | Move away from third party inspections
- | Reduce cost
- | Increase efficiency

#### **RESULTS**

- | Reliable and mobile analyser
- Improved efficiency
  - Great after-sales service

# PMI-MASTER Pro2 analyser helps Douson Valve control the quality of steel alloys

Founded in 2007, Suzhou Douson Valve Co., Ltd, a member of Douson Group in China, is a specialist manufacturer of industrial pipeline valves. Top priority for the quality department is how to best ensure quality control and assurance in the production process. They do this by analysing the composition of the nickel and carbon in the steel alloys that are incoming but also ensuring consistent quality throughout the production process. The team has bought three mobile optical emission spectroscopy (OES) PMI-Master Pro2 analysers by Hitachi High-Tech to help them with this task.

### STRICT QUALITY CONTROL ENSURES SUCCESS WITH CUSTOMERS

Douson Valves has implemented strict technical standards for quality control as part of their design, manufacturing and sales processes. According to Li Yun, Laboratory Director in the Quality Department, "We carry out quality control against the API 6D standard which means inspecting the chemical composition of the incoming material samples."

We've been a customer of Hitachi for more than 10 years and are currently using three PMI-MASTER Pro2s 11

"We've formulated in-house material acceptance specifications and always inspect the materials delivered to us by our suppliers. This is to ensure they're compliant with our requirements and help us confirm we get accurate chemical composition of the alloys we will be using, which is vital for the work we do. When the products manufactured by us are delivered to our customers, they also carry out corresponding acceptance inspections."

#### **BECOMING MORE EFFICIENT**

Before mobile spectrometers were purchased for in-house use, Douson Valves used a third-party inspection organisation to verify the quality of the materials. However, using a third party for verification was costly and took too long, making the process very inefficient. As Douson Valves' output grew, it also became inconvenient to transport all the materials to the third party for testing.

To support the growing business, the Quality Department urgently needed to purchase a mobile spectrometer for their laboratory to test for carbon and nickel content in steel alloys.

According to Li Yun, "We first purchased a mobile OES analyser in 2008. At that time, we compared similar products from several companies. We selected Hitachi High-Tech's PMI-MASTER Pro2, being impressed with its reliability and convenience. The after-sales service has been great too, including service and the support at implementation stage. The Hitachi High-Tech team helped us with selecting the best testing methods and the most suitable configuration. Since purchasing our first mobile OES analyser ten years ago, we have since purchased another two, with all three currently in daily use."



### **GREAT BENEFITS THROUGHOUT THE WHOLE PROCESS**

Li Yun continues, "Usually the incoming materials that need to be verified are in large volume so it's inconvenient to take samples from them to the laboratory. Whilst it's necessary to inspect the chemical composition of the metal, the PMI-MASTER Pro2 analysers are convenient and can be pushed to the right location on the production floor. This means we can insect products directly without slicing and taken them back to the laboratory or providing them to a third party. Sometimes we also take delivery of outsourced products which are transported to us for analysis. As these products are finished and cannot be damaged, the PMI-MASTER Pro2 is also able to do the job for us."

Speaking of the advantages of a PMI-MASTER Pro2, Li Yun concluded, "PMI-MASTER Pro2 provides us good on-site reliability, high precision, and results within 20 seconds, which is very fast. That's why when we needed to purchase further analysers, we turned to Hitachi."

If you would like to see the PMI-MASTER Pro2 analyser in action visit www.hitachi-hightech.com/hha or email contact@hitachi-hightech-as.com to book a demo.

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### **MOBILE OES RANGE**

Our optical emission spectrometers (OES) offer the highest levels of accuracy and precision for analytical results. A powerful yet easy-to-use software package covers almost every application. Suitable for any metalworking application, starting with tramp element analysis for scrap to inspection of incoming materials and QA/QC in the manufacturing process.