Trend toward centralized purchasing and TCO

Centralized purchasing and lowest total cost of ownership validation of valves has become more cost effective due to remote monitoring, data analytics and process management software. Owners are also more involved with offshore construction of new plants. The result is that someone who's not residing at the plant location or even in the same country makes the important decisions.

Bob McIlvaine

Sixteen companies (see table 1), based in France and Germany, each spend more than $50 million per year for valves.[1] Five spend even over $100 million per year. The extent to which these purchasing decisions are made remotely, is determined by whether the valves are general performance or high performance. General performance valves are often purchased locally without corporate guidance.

The opposite is true of high performance valves. Both severe service and critical service valves fall in the high performance category. Pharmaceutical companies such as Merck have a number of valves which are not subjected to severe service but must perform in such a manner to maintain product integrity. Therefore, pharmaceutical companies set up critical service standards which apply to all their plants regardless of the location.

Role of the distributor

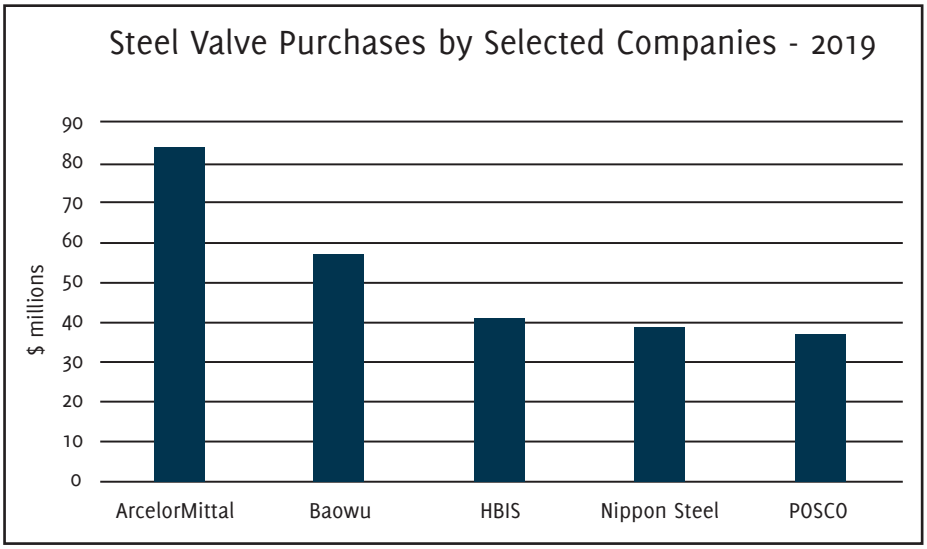
This trend of centralized purchasing has an impact on the role of the distributor. Since high performance valve purchase decisions are likely to be made remotely, the local sales role is diminished. On the other hand, stocking of valves and repair needs to be local. With remote monitoring it is possible for the valve supplier and distributor to play a larger role. For example, personnel at a valve company could continuously monitor valve performance and then take appropriate maintenance action as needed.

The steel industry is a good example of both offshore ownership and centralized purchasing. The global steel industry will spend over $1.7 billion this year for valves, parts, and service. In the case of ArcelorMittal, the majority ownership is by an Indian individual but the decisions regarding valve purchases are most likely to be made in Luxembourg where the company's headquarters is located. ArcelorMittal is a major valve purchaser (see table 2). Its valve purchases for steel and mining applications are just under $100 million per year of which $84 million is for steel applications.

Table 1: Valve purchases by large companies with their home base in France and Germany - 2019

Company	Home	Industry	$ millions
Air Liquide	France	Chemical	84
EDF	France	Power	583
Engie	France	Oil & Gas	143
LaFarge Holcim	France	Stone	72
Sanofi	France	Pharma	50
Schlumberger	France	Oil & Gas	57
Total Refineries	France	Refinery	235
Total SA	France	Oil & Gas	339
BASF	Germany	Chemical	311
Covestro	Germany	Chemical	65
Evonik	Germany	Chemical	73
Heidelberg	Germany	Stone	36
Linde	Germany	Chemical	82
Merck	Germany	Pharma	50
Uniper	Germany	Power	51

Table 2:



Purchasing power

ArcelorMittal's purchasing power - in valves and other related equipment - is understandable given the size of the company and its operations. The multinational is the largest producer of steel in North and South America and Africa, a significant steel producer in the CIS region, and has a growing presence in Asia, including investments in China and India. It is also the largest steel producer in the EU, with significant operations in France, Germany, Belgium, Spain, Luxembourg, Poland, the Czech Republic and Romania. ArcelorMittal is also a mining leader, with a global portfolio of 14 operating units with mines in operation and development and it also is one of the largest iron ore producers in the world.

Investments in IIOT-solutions

ArcelorMittal works with more than 70,000 direct suppliers, covering an annual spend of around $50 billion for raw materials, energy, industrial products and spares, as well as various services.

With remote monitoring of valve operations and data analytics the company has stated it will have the background data to determine the lowest total cost of ownership. In order to achieve this, it has invested heavily in IIoT working with ABB, Schneider Electric, GE, Siemens and other suppliers. At the Olaberria plant in Spain, as an example, valves associated with the melting, dust collection and other equipment are continuously monitored and data analyzed.

It can be expected that more and more companies will follow suit and centralize their purchasing activities, using extensive cost of ownership analyses. It is definitely a trend which will increasingly influence valve purchases.

Lakshmi Mittal

Lakshmi Niwas Mittal owns controlling shares in ArcelorMittal which he founded. He is one of the world's wealthiest individuals and sits on the board of Goldman Sachs. Mittal grew up in an Indian family in the steel business. Until the 1990s, the family's main assets in India were a cold-rolling mill for sheet steels in Nagpur and an alloy steels plant near Pune. Lakshmi Mittal decided to strike out on his own and opened his first steel factory PT Ispat Indo in Sidoarjo, East Java, Indonesia in 1976. He then founded ArcelorMittal which is now the world's leading steel and mining company, with annual achievable production capacity of approximately 113 million tonnes of crude steel, driven by 197,108 employees working in 60 countries.