



Welding Automation In India

The country has been through a somewhat turbulent industrial scenario during the past few months. It all started with the phenomenal rise in crude oil prices that was mainly responsible in propelling a sudden jump in inflationary trends, and which though appeared to be slowly coming back to the grips is again looking upward and hovering around 12%. The Political uncertainty on the nuclear deal issue, the sudden slump in the stock market and the rising cost of borrowing from the banks are the other adverse factors. In the short term all these factors could act as dampeners to the fast growth of the economy, however many of the experts, both Indian & overseas still firmly believe that India can overcome these hurdles and maintain a decent growth rate of 8% and above.

On this note, I will pick up one area of great promise i.e industrial automation and more specifically industrial robots used in welding automation.

Of late, many American, Korean and even Japanese firms are using the country as a hub for production of industrial robots, alongside domestic companies. "Robo Expo" a recent exhibition organized by the Confederation of Indian Industry (CII) in New Delhi witnessed the launch of a number of new robots. The exhibitors included ABB, Panasonic, Kuka, Precision Automation & Robotics India (PARI), Motoman Motherson Robotics, Hi-Tech Robotics Systemz and Fanuc eyeing the Indian market where companies are increasingly focusing on automation. It is also heartening to note that of the 11 robotics companies at the Expo, five were Indian. Prime Minister Dr. Manmohan Singh has already talked about the need to increase activities in the Indian robotics space. "We plan to go in for precision guided munitions as well as unmanned vehicle technologies in the 11th and 12th Plan period," he said recently.

Indian companies are already involved in about five defence related projects and more small companies will also benefit. According to industry estimates, from 2008 onward, the world market for industrial robots is projected to rise by a yearly average of 4.2 percent, going to 139,300 units in 2010." In India, the industry is expected to grow at two to two-and-one-half times the global average and the shipment and operational stock of multi-purpose industrial robots in India is expected to touch 4,500 units by 2010 from 540 units in 2005. The numbers are still far less than other countries, but considering India's late entry, the potential seems tremendous. Although the application of robotics and artificial intelligence technologies in India is quite new. but now, India is becoming an international manufacturing hub and domestic players are realizing the advantage of robotics and automation and at present, the growth in India is much faster than in Japan or other Asian countries according to reliable sources. Tranter, a Swedish company with U.S. headquarters in Wichita Falls, Texas that manufactures gasketed and welded-plate heat exchangers, has replaced manpower with robots that it acquired from a Pune based firm whose industrial robots are used by global companies including Caterpillar, Hitachi, Bosch, Emerson Power, American Axle, Honeywell and Indian subsidiaries of multi-national companies (MNCs) such as Samsung, Philips, LG, Suzuki, Renault, Ford, Honda and Hyundai.

Automobile firms account for the biggest share of the market and at Tata Motors such Robots were installed for welding and pressing automation of a range of their automobile models and they alone are said to have plans to install over 300 robots for its upcoming projects. Opportunities inside and outside India, in the field of robotics, are tremendous and in the near future, we may see Indian companies become billion dollar firms.

All these, because Robots can cut cost, maximize efficiency, productivity and safety, and can also overcome the problem of manpower shortages and human errors.

P. K. Das

P. K. DAS
Editor - IWJ