

Industrial Research Assistance Program (IRAP)

Region:
Alberta and N.W.T.
Calgary

Kudu Industries



"Kudu is a successful company today because Chuck showed us what lean manufacturing could do, and assisted us as we transformed our business."

Robert Mills, CEO, Kudu Industries

Less is more - Lean manufacturing takes firm from gloom to gusher

When Calgary-based Kudu Industries introduced a much more efficient oil pump into Alberta's petroleum patch in the late 1970s, the company developed financial momentum that lasted well into the 1990s. And when the company subsequently redesigned its production strategy to keep that momentum going, the results proved to be even more successful.

Kudu CEO Robert Mills was one of the first people in Canada to begin working with oil well progressing cavity (PC) pumps. This hardware is capable of maintaining the tremendous pressure necessary to keep oil flowing, while also resisting clogging and other problems that regularly plague conventional pumping equipment. Moreover, PC pumps can do the job for about one quarter of the price of the conventional equivalent, using only about half the power.

The first PC pumps in Canada went into service in 1979, pumping heavy, sand-laden oil. Kudu was founded in 1989, in order to serve a market for PC pumps in Alberta's medium crude oil wells. Business boomed for the better part of a decade, but a collapse in the price of oil caused sales to crash in 1998.

Mills turned to Chuck Harrison, a manufacturing consultant and Industrial Technology Advisor with the Industrial Research Assistance Program (IRAP). An initiative of the National Research

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Web site:

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Council, IRAP works closely with small and medium-sized enterprises, helping them grow their businesses, increase their competitiveness, and enhance their impact in the marketplace.

IRAP had previously helped Kudu to hire engineering students for a number of research projects. This time, however, IRAP ushered in major changes for the way the company went about its business. Harrison pointed to the need for “lean manufacturing”, maintaining a much smaller volume of ready materials and products in order to reduce overall operating costs.

“We don’t stockpile inventory on the shop floor anymore,” says Mills. “We have overhead bridge cranes to move inventory as needed. Consequently we have freed up significant space. Now that we have room on the floor, instead of contracting out our machining, we purchased our own machine tools, we’ve trained people and are doing it ourselves.”

Harrison also recommended that Kudu adopt ISO 9001 standards, written procedures to guarantee performance and quality of production. This dramatic restructuring also led to streamlined decision-making processes, which entailed greater participation by teams of people working closely together.

These changes have vastly improved Kudu’s prospects. Annual sales now top \$30 million, and the firm has made three acquisitions and has almost no bank debt. Perhaps most importantly, the company now conducts more R&D work in its field than any other in Canada, holding 17 patents dealing with PC pump technology.

Mills, for his part, links these accomplishments directly with IRAP.

“I don’t think we would be where we are today without Chuck Harrison,” he says. “His insights were invaluable, and his individual effort was extraordinary. Kudu is a successful company today because Chuck showed us what lean manufacturing could do, and assisted us as we transformed our business.” ■

Contact:

Robert Mills, CEO
Kudu Industries
Tel: (403) 279-5838
www.kudupump.com