



NEW WATER-COOLED ROTARY AIR COMPRESSOR YIELDS 17% MORE AIR

CLIENT
AM/NS Calvert

LOCATION
Calvert, Alabama



THE SITUATION

The 7,000,000 square-foot facility of AM/NS Calvert — a joint venture between ArcelorMittal and Nippon Steel Corporation — is one of the most advanced steel finishing facilities in the world. It produces a broad portfolio of steel grades for high-value applications, including hot rolled bands, hot rolled pickled and oiled, cold-rolled, and advanced coated products. Instrument-quality compressed air is used for a variety of production equipment and processes.

THE CHALLENGE

Catastrophic failure of an older air compressor meant the plant had to rent a compressor for a costly monthly rental fee, plus expensive diesel fuel. A matrix of requirements for a new compressor was developed, but the plant's hands were tied because the replacement would have to fit a tight footprint and limited power availability.

THE SOLUTION

A two-stage Kaishan KRSP2-500-110 water-cooled rotary air compressor met the matrix of requirements. The design fit the footprint and power limitations, plus provided valuable maintenance advantages.

THE RESULTS

- 1 FOOTPRINT**

The KRSP2-500's compact 153 in. long x 99 in. wide x 89 in. high dimensions enable an easy replacement in a tight mechanical room.
- 2 ELECTRICAL**

Kaishan was able to integrate the customer's existing motor starter into their package, which made electrical installation a snap.
- 3 KW SAVINGS**

Two-stage efficiency and high flow rate and low-power consumption (almost 5 CFM/HP versus 4 to 4.5 CFM/HP from typical single-stage compressors) reduce kW consumption by 8.5% (compared to other two-stage designs).
- 4 MAINTENANCE**

Larger space inside the compressor for maintenance simplifies changing filters and performing routine maintenance.
- 5 LOWER COST OF OWNERSHIP**

Lower kW consumption and enhanced maintenance reduces cost of ownership throughout life cycle.
- 6 FACTORY-BASED TRAINING**

Factory-trained technicians provide proper operation and maintenance (O&M) instruction.
- 7 WARRANTY**

Lifetime airend warranty covers the part of an air compressor that is the most expensive to replace and maintain.
- 8 SOUND**

82 dB provides a more manageable sound level for the mechanical room.

"FOR OUR 24/7 OPERATION, THE KRSP2 TWO-STAGE ROTARY AIR COMPRESSOR HAS BEEN RUNNING LIKE A CHAMP.

IT'S A WINNER FOR EFFICIENCY, SOUND LEVEL, MAINTENANCE, AND FOOTPRINT. PLUS, IT CAME WITH A LIFETIME AIREND WARRANTY, INCLUDING TRAINING, WHICH MOVED IT FAR AHEAD OF COMPETITORS."



Floyd Patterson
Sr. Specialist
Reliability Maintenance
CRM AM/NS Calvert
Calvert, Alabama, USA

