Atlas Specialty Steels

Atlas Specialty Steels Division, Rio Algom Limited, is Canada's leading producer of Tool Steels including "cold work", "hot work" and "plastic mold" types and other special purpose grades; also of Stainless Steels in 300 and 400 series including precipitation hardening types; of Valve Steels; of Titanium; of Rock Drill Steels in hollow & solid forms; and of Alloy Steels & Special Quality Carbon Steels in all AISI/SAE grades including micro alloy types. Its head office and steelmaking operations are strategically located in the Niagara Peninsula close to major industrial centres in both Canada and the United States.

The wide range of specialty steels produced in the Welland facility are made in all standard bar product forms: round, square, flat, octagon, hexagon and special shapes. These products, in sizes up to 9" (228 mm) diameter, are supplied hot rolled, annealed, heat treated, rough turned, smooth turned, cold drawn or centreless ground and polished, directly to major industries (automotive, construction, mining and agricultural) as well as through a network of metal service centres to general metal fabricators. In addition, Atlas also supplies the forging industry and other steel processors with their primary requirements for top poured and bottom poured ingots as well as billets and blooms.

Atlas celebrated its 50th anniversary in 1978 with full scale operation of a new melt shop. This facility today combines rapid electric arc melting of carefully selected steel scrap in 60-ton furnaces with a choice of three closely controlled, postmelt down refining treatments; vacuum arc degassing, vacuum oxygen decarburization and argon refining. In combination, these systems provide precision alloying, arc reheating, inert gas stirring, low sulphur control, calcium treatment/inclusion modification, cored wire injection plus full vacuum degassing. Atlas employs a fourth advanced refining process, vacuum arc remelting, to meet stringent specifications for ultra clean steels with special mechanical properties.

In 1954, Atlas was the first steel producer in North America to continuously cast steel on a successful commercial basis. Continuous casting by-passes the conventional ingot route and transforms molten steel into solid sections in minutes. In 1965, Atlas engineers were again first with curved mold continuous slab casting and in 1988 the company began operation of its state-of-the-art, 3-strand billet and bloom caster in the Welland melt shop.

Following melting and casting, ingots are reheated and hot rolled (or press forged) into large bars, blooms and billets. After conditioning, billets are hot rolled into bar products on either a volume production mill or a custom mill. Products are shipped hot rolled or receive further cold finishing in a modern 150 000 sq. ft. facility.

The Atlas Welland plant has a production capacity of 285 000 tons and employs 1 600 people. Quality is emphasized throughout their operations and includes use of statistical process control as well as a permanent commitment to the training of all employees in modern quality assurance procedures and verification of quality performance at each stage of production.