



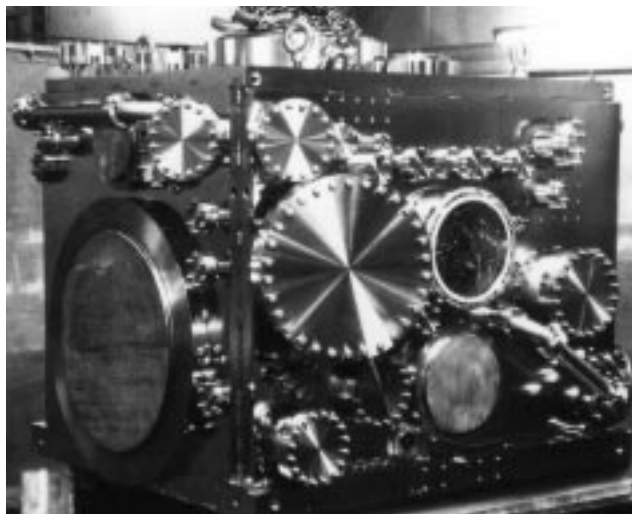
## VSP = Vacuum Applications

The cleanest stainless plate available

Sandmeyer Steel Company's *Vacuum Select Plate (VSP)* incorporates quality controls every step of the way to ensure the highest possible internal cleanliness for the most demanding vacuum applications.

### VSP = Controlled melting and casting

- Raw materials are air-melted in an electric arc furnace and refined in an argon oxygen decarburization or a vacuum oxygen decarburization unit.
- Molten stainless steel is cast into slab using the continuous casting process.
- During casting, turbulence within the tundish created by the feed stream from the ladle can be a major source of internal cleanliness problems in steel. When making VSP material, Sandmeyer controls this by carefully selecting a melt source with a tundish that holds a large enough volume of liquid metal to sufficiently dampen the turbulence caused by the feed stream.



### VSP = Special identification and testing controls after casting

- Sandmeyer purchases full heats of continuous cast slabs and then rolls its plate from these slabs. Stringent identification procedures from casting through final rolling allow Sandmeyer to identify the slab from which every single plate has been rolled. Only plates rolled from select slabs located in the cleaner center of a cast are qualified as VSP material.
- VSP material is routinely subjected to and passes inclusion testing that is performed by an independent laboratory in accordance with the standard practice for determining inclusion content of steel, ASTM E-45 Method A.
- Finally, "step-down" testing is performed on VSP material on a routine basis by cutting circles from opposite corners of a plate, machining steps on the faces at 1/16" increments, and closely examining the machined surfaces for sub-surface defects.

### VSP = The material for vacuum applications

For your toughest vacuum and semi-conductor applications – call Sandmeyer and ask for *Vacuum Select Plate*.



**SANDMEYER STEEL COMPANY**  
ONE SANDMEYER LANE • PHILADELPHIA, PA 19116-3598  
800-523-3662 • FAX 215-677-1420 • [www.SandmeyerSteel.com](http://www.SandmeyerSteel.com)

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