



Polishing Sheet & Plate Stock Removal Guide

All sheet/plate will have varying degrees of material removal **required to render a quality finish** on the polished side. If you polish two sides the stock removal is obviously doubled given identical condition on both sides of the prepolished surface.

One needs to be sure that plate gauge reduction is accounted for in engineering calculations as it regards structural integrity and various codes.

- **Sheet material** (7 ga. and thinner) material is produced with a mill 2B surface and requires the least stock removal.
 - max. of 0.005" for 7 and 8 ga., and .001-.002 for lighter gauges. Typically, with sheet polish the surface is more "altered" than removed.

- **Coil Mill Plate (CMP)** Produced in 48", 60", 72" and 78.5" (two meter) wide from 0.1875" to 0.5" typically requires HRAP removal of 0.008" to 0.015".

*Note that all coil mill plate is produced "light to gauge", which means that 0.375" material will actually measure in thickness anywhere from 0.365" to 0.375". If ASTM min. gauge is .010" below nominal, typical **polish** stock removal will take the material under the ASTM min. allowable thickness.*

- **Plate Mill Plate (PMP)** (all plate thicker than .5") requires stock removal of .015" up to .030" depending on gauge and HRAP mill surface. Typically, the thicker the plate the more course the prepolish mill surface.

Note that all Plate Mill Plate has a rougher surface finish and requires more polisher time and material removal to result in the same finish quality and roughness as CMP. This plate is usually produced heavy-to-gauge or slightly thicker along the edge and even more so in the plate "crown". IE .75" nominal plate will typically be .003" to .005" thicker than nominal at the edge and as much as .020" above nominal in the crown.

Additional note on ASTM tolerance for thickness of plate produced – it is allowable for plate to be 0.010" LESS than the thickness ordered and 0.040" thicker. Distributors will commonly purchase coil mill plate less than nominal thickness.

- **Surface Pitting:** While the polishing process will usually remove most pits, a standard polished plate will not necessarily be PIT-FREE. If it is required by end use to be pit-free, most polishers will charge a modest upcharge to guarantee this condition. All polished surfaces should be 100% free of the mill HRAP surface but will not be PIT-FREE unless you specify for that type of processing on the front end (purchase order). In the case quality 2B sheet, that product is produced virtually pit-free and not needed to be upcharges to render pit-free form a qualified polisher. The exception is 8 and 7 gauge that typically have some light pitting and may require modest additional work to become pit-free.

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