The surface finishes that are available on U. S. Steel Cold Rolled Sheet are listed below. Surface finish relates to the macroscopic roughness of the sheet surface. The designations refer to specific surface roughness ranges as measured in arithmetic average (AA) microinch roughness or root mean squared (RMS). The actual roughness values can be determined quantitatively. They are determined using a diamond-tipped tracking stylus that records the peak heights and valley heights as the stylus is passed over the strip surface. The most common instrument that is used to measure the surface roughness is called a profilometer.

Cold Rolled Sheets are produced with the following finishes which are defined with a specific quantitative roughness values that are determined using a profilometer.

• **Regular Matte**
  This finish is widely used for most applications of cold rolled steel sheet. The finish provides a uniform dull surface that is suitable for painting and lacquering. The roughness as measured using a profilometer is approximately 35 to 65 microinches.

• **Light Matte**
  A light, matte finish is used for applications where a finish smoother than that available with a regular matte finish is required for improved reflectivity after painting or lacquering. The roughness as measured by using a profilometer is approximately 20 to 45 microinches.

• **Rough Matte**
A rough matte finish is sometimes used for applications that require a rougher finish than regular matte, e.g. applications requiring porcelain enameling. The roughness as measured by using a profilometer is approximately 55 to 90 microinches.

- **Ground Roll Bright**
  A bright sheet surface generally used for high luster lacquered or electroplated applications. The roughness range is approximately 20 to 40 microinches.

- **Commercial Bright**
  Sheet that is manufactured to provide a smooth, reflective, bright finish. The product is normally intended to be electroplated when a highly reflective finish is required. The surface usually requires additional buffing and polishing after plating. The product is manufactured to meet a 10 microinches maximum roughness.

- **Brushed Bright**
  This product has a smooth finish with a brushed appearance. Again, it is normally used for applications where the finished part is electroplated. The product is typically manufactured to meet 15 microinches maximum roughness.

- **Embossed Steel Sheet**
  This is a special surface finish that is provided for applications where a distinctive pattern is desired after painting. During manufacture, one surface is rolled using a rough, patterned roll to provide a "stamped" pattern on the surface that is intended to be exposed after processing by the customer. The pattern depth is typically 0.0025 to 0.0035 inch deep. U. S. Steel provides Embossed Steel Sheet with three different types of patterns. The patterns give a distinctive appearance to the end product. Also, the patterns provide a "fingerprint" resistant surface,
meaning that fingerprints are not very noticeable when the product is touched. The most widely used pattern is Super Seville 101.