DEPARTMENT OF THE TREASURY

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This ruling concerns the country of origin of cold rolled steel sheet which is produced in one country and further processed by galvanization or by galvanization and coating in a second country.

ISSUES:

1. Is full hard cold rolled steel sheet, in coils, substantially transformed by a continuous hot-dip galvanizing process?

2. Is full hard cold rolled steel sheet, in coils, substantially transformed by a continuous hot-dip galvanizing process, followed by coating with a primer, tension levelling, and application of a paint, liquid plastic, or solid plastic laminate?

FACTS:

Continuous hot-dip galvanizing is a process by which a steel product is cleaned, annealed, and galvanized in a continuous operation. It consists of the following:

1. Cleansing the steel.

2. Annealing the steel to alter the structure from Alpha to Gamma steel; prepare surface for inter-penetration of zinc to form alloy.

3. Controlled cooling to desired temperature for immersion into molten zinc.

4. Immersion into molten zinc (430° - 470° C).

5. Trimming of zinc and zinc alloy to specific tolerances dictated by end use.

6. Minimizing spangle by spraying additional zinc on to the surface; rolling to normalize.

7. Tempering (cold rolling).

8. Treatment of zinc surface with chromate.

At this point the continuous hot-dip galvanizing process is complete. This processing increases the cost of the steel sheet by approximately 46 percent, excluding an amount for profit. The cost of the zinc represents approximately one half of the value added to the steel sheet.

The continuous hot-dip galvanizing and finish coating operation consists of the following:

1. Steps 1 through 8, as described above.

2. Pre-treating the galvanized steel for finishing.

3. Application of prime coat.

4. Stretching and leveling.

5. Application of finish coating:

   a. Painting and baking.
   b. Lamination with liquid plastic.
   c. Lamination with solid plastic.

At this point the processing of the galvanized and coated product is complete. The processing increases the cost of the steel sheet by approximately 85 percent, excluding an amount for profit. The cost of the zinc and coating materials represents up to approximately 72 percent of the increased cost.

You propose that continuous hot-dip galvanizing, and continuous hot-dip galvanizing and coating, are substantial transformations resulting in a product of the country of processing.

LAW AND ANALYSIS:

Unlike other galvanization processes, hot-dip galvanizing produces a layer of alloy metal (zinc-iron) which functions as a molecular bond between the steel substrate and the zinc coating. The nature of the alloy layer depends on several variables: temperature of the steel at entry into the zinc bath; chemical composition of the zinc bath; metallurgical nature of the steel; and duration of immersion. These factors are controlled by the processor to produce products for specific end uses.

Galvanization is essentially a surface protection treatment and does not affect the underlying nature of the steel sheet. It does not change the name, character, or use of the steel sheet. Galvanization does enhance the corrosion-resistant quality of steel sheet, but it is essentially one of several types of surface finishing processes that are used for this purpose. The creation of a molecular bond between the steel and zinc layers is not conclusive evidence that it produces a different article.

There is change in the article, but not every change is a substantial transformation. A substantial transformation requires that an article, subjected to a manufacturing or processing operation, be transformed into a new and different article having a distinctive name, character or use. Such a transformation may occur when an article which is

suitable only as producers' goods is further manufactured into consumers' goods, provided that the further manufacturing substantially increases the value of the article or that it transforms the article so that it is no longer the essence of the final product. National Juice Products Association, v. United States, ____CIT____ (Slip Op. 86-13, decided January 30, 1986).

The name "galvanized steel sheet" is not clearly a new name because it describes steel sheet with a particular enhancement. The product remains "steel sheet" even though it is protected against corrosion by a zinc coating. Similarly, the product does not have a new character. The underlying character or essence of the product is that of a steel sheet with certain structural dimensions and chemical composition. The additional protective surface may make the steel sheet a better product for certain applications, but it does not change its inherent, multi-purpose nature, that is, it remains a producer good. (Cf. Midwood Industries, Inc. v. United States, 64 Cust. Ct. 499, C.D. 4026.) The formation of a zinc-iron alloy as a bonding layer between the zinc and steel, as opposed to coating by surface adhesion, does not persuade us that hot-dip galvanization is a distinguishable processing that would result in a substantial transformation.

The annealing process is a common heat treatment incorporated with a hot-dip galvanizing process to achieve more economical production and better quality control.

Annealing increases the formability of steel. The underlying nature of steel is one that is versatile. It has many inherent characteristics that may be selectively elicited by a specific processing, such as heat treatment or a mechanical working. The purpose for annealing steel sheet is to improve formability, as well as to relieve stress created by mechanical working. It is our position that a heat treatment of this nature does not result in a new and different article.

Finally, the use of the steel sheets has not changed. The galvanizing is primarily a rustproofing process intended to enhance the durability the product, but it does not qualify the product for new uses, nor disqualify it for the uses for which it was suited prior to galvanizing, because the essential character and appearance has not been changed. Whether or not galvanized, steel sheet is suited for a wide variety of uses that include automotive parts, roofing and siding, air conditioning equipment, garbage cans, pails, tubs, kitchen equipment such as refrigerators, deep freezers, washers and dryers, agricultural equipment, and mail boxes. Galvanizing is merely a finishing operation intended to prevent corrosion of the steel sheet.

Therefore, the continuous hot-dip galvanization process does not substantially transform steel sheet for purposes of determining country of origin.

It is our view that this outcome is not altered by the mere application of paint to the galvanized coil.

However, the addition of a plastic coating process, together with the continuous hot-dip galvanization, leads us to a different conclusion. The surface coating, whether a plasticized textured laminate or a hard plastic laminate, is an additional surface treatment that, in addition to increasing the cost by a significant amount, creates a consumers' good, with a finished surface for a particular class of fabricated articles. The coatings are custom made and highly specialized for more limited applications where certain physical properties, fabrication characteristics, and decorative needs must be taken into account. Even though the additional cost is attributed primarily to the materials, we cannot ignore either the significance of the total cost added by these processing operations, or the fact that the plastic coating significantly determines the products which will be manufactured from the coated coil.

The nature of the plastic-coated galvanized steel sheet is such that it is usually processed directly into a finished article or component by bending, drawing, or other forming operation. It eliminates the coating of these articles after they are formed. It is not longer a simple structural material.

Furthermore, as noted above, the sum of the continuous hot-dip galvanization and the plastic coating processes

substantially increases the value of the product. The nature of its end use is clearly more restricted. National Juice Products Association, supra. We conclude that the processing results in a new and different article, and that the processing is substantial. Therefore, the country of origin is the country in which the steel sheet is processed by the continuous hot-dip galvanization and plastic coating operations.

HOLDINGS:

1. Continuous hot-dip galvanizing, with or without painting of the galvanized surface is not a process that results in a substantial transformation so as to change the country of origin of hard cold rolled steel sheet.

2. Continuous hot-dip galvanizing and surface coating with plastic laminates is a process that results in a substantial transformation. The country of origin of the galvanized and coated sheet is the country in which it was processed.

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Regulations and Rulings