Standards Topics



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Spring Meeting of ASTM B08

The semi-annual meeting of ASTM Committee B08 on Metallic and Inorganic Coatings is scheduled during "Committee Week," April 8– 10 in St. Louis. Committee Week is an ASTM euphemism to indicate that a number of individual committees with similar or allied interests will be convening during that same week. The location was changed from ASTM Headquarters to promote greater attendance, allow for interaction between committees, and reduce the travel and time costs for members of multiple committees.

ASTM B08 & A01 Committees The B08 Committee has been having interactions with the ASTM A01 Committee on Stainless Steel. ("Interactions" is my euphemism for shouting matches!)

This interaction resulted from the B08 Committee's actions in responding to a request from a food-handling equipment manufacturer and its finisher. The B08 Committee initiated work on a standard for a treatment of stainless steel surfaces that sequentially electropolished and passivated the stainless steel surfaces. It also improves the ability of food-handling equipment to be cleaned or sterilized by removing metal and smoothing areas where bacteria can lodge, and then chemically repassivating the stainless steel surface.

A member from another ASTM committee (A01 on Stainless Steel and Related Alloys) objected to the proposed B08 standard and cast a negative Society ballot—not on the grounds that it was technically flawed or was in any way providing misleading information, but solely on his inaccurate concepts about passivation and what the scope of the B08 committee covered. For the record, the ASTM Directory has published the following concerning Committee B08:

"The Scope for Committee B08 is: (1) Metallic and inorganic coatings on products and (2) electroformed materials and products. The scope includes: (1) Development and preparation of specifications, methods of tests, practices, guides, definitions and terminology applicable to the properties of the coatings and electroforms, to their performance in use and test, and to the processes and materials used to produce them, (2) organization and presentation of relevant symposia and other meetings for the dissemination and exchange of technical information, and (3) publication of Special Technical Publications and other special documents.

"Coatings covered in the scope include, but are not limited to, those produced by electroplating, autocatalytic (electroless) plating, immersion plating, vacuum processes (such as vacuum metallizing, sputtering and ion plating), chemical conversion (such as chromating, phosphating and black oxide), anodic oxidation (such as anodization of aluminum, magnesium and zinc), hot dipping (such as with molten tin, tin-lead alloy and zinc), thermal coating processes (such as flame spray, chemical vapor deposition, plasma spray and detonation coating), porcelain enamel and ceramic-metal coatings fused at temperatures greater than 427 °C (800 °F). Excluded from the above scope are sheet, wire and tin mill products."

The negative voter went on to say, "The passive film of stainless steel is not a chemical conversion coating; it is the naturally occurring surface condition of stainless steel." He also stated that "the proposed standard is clearly outside the scope of the committee and subcommittee."

The 8th edition of the Compilation of ASTM Standard Definitions defines four relevant terms:

Conversion coating—is defined as "a coating produced by chemical or electrochemical treatment of a metallic surface that gives a superficial layer containing a compound of the metal; for example, chromate coatings on zinc and cadmium, oxide coating on steel," (B08).

Conversion treatment—is defined as "a chemical or electrochemical process producing a superficial layer containing a compound of the metal," (B08).

Chemical conversion coating—is defined as "a protective or decorative nonmetallic coating produced *in situ* by chemical reaction of a metal with a chosen environment (often used to prepare the surface prior to the application of an organic coating)," (G15).

Electropolishing—is defined as "the improvement in surface finish of a metal effected by making it anodic in an appropriate solution," (B08).

Long-standing, established ASTM definitions do not appear to support the A01 negative voter.

The scope of the A01 Committee— "The promotion of knowledge, the stimulation of research and the development of specifications, test methods, terminology and other types of standards relating to cast or wrought steels, stainless steels and related alloys and ferroalloys" doesn't appear to give them any grounds for their position.

The B08 subcommittee involved, B08.07 on Conversion Coatings, overruled the A01 negative vote, and the main B08 Committee supported that position. There is now a need to sit down and resolve the question to everyone's satisfaction. Because of this, we moved our B08 meeting from West Conshohocken to St. Louis in April. Why, then, has the ASTM meetings department scheduled A01 to meet in May? **PASF**