Problems from the Field

Over the last several months I have received a number of calls from readers concerning problems trying to meet ASTM B 633—Electrodeposited Coatings of Zinc on Iron and Steel. In each case, the purchase order simply stated, “Plate to ASTM B 633.” Clause 5 of the specification, Ordering Information, states that “the purchaser shall state the designation number, date of issue, class or service condition number and type. In addition, when necessary, electroplating application to high-strength steel; location of significant surfaces; luster (dull, semi-bright or bright); any corrosion resistance test to be met; any hydrogen embrittlement test to be met; the sample size for inspection; and any supplementary requirements.” Clause 4 of B 633, Classification, defines four thickness classes with their associated service conditions, and four supplementary finish types, making some 16 available varieties. My advice to the callers was to go back to the purchaser and have the purchaser select the variety desired.

My last caller brought a new perspective to the problem. When he had questioned the purchaser as advised, the customer responded by sending its truck to pick up the parts and turned the job over to someone else! The caller stated that this was not an unusual reaction, and that it had happened to him on several occasions.

He went on to suggest that the ASTM standards should have default values, simply because you cannot require a purchaser to do anything. In that respect, he is absolutely right. Unfortunately, those of us who write specifications tend to state in mandatory terms what the purchaser should do to make the specification complete.

Recently, in crafting ASTM B 849 and B 850 (the new standards for pre- and post-plating hydrogen embrittlement relief), we were faced with the question of what to do when the purchaser fails to specify the treatment to be used. After all, the purchaser and his parts designer and engineering staff are the most qualified individuals for selecting the treatment. It was recognized that if the plater selected a treatment, then the plater would be liable for any part failure caused by embrittlement, as well as all damages. With a default treatment in the specification, liability fell upon the purchaser.

In selecting a default hydrogen embrittlement treatment, it was recognized that the most vigorous treatment needed to be called out, as a matter of caution. The idea of defaults may be the way out of the dilemma created when an incomplete specification callout is made.

At the Fall meeting of ASTM B08, I related the problem to the B08 executive committee and asked each of the subcommittee chairmen to try to institute defaults for each of the options in the specifications for which they were responsible. It would also be very helpful if those of you reading this column would let us know your opinion.

The rest of the meeting was uneventful, although the new palladium-nickel specification and the revision to the gold specification moved to the balloting stage. Bill Polleys held an all-day session on the revision he is preparing to the ISO 2080 terminology specification. Considerable progress can be reported. Progress can also be reported on the specification for chromium diffusion coatings. P&SF