

DATE: April 22, 1991
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SUBJECT: HSLA and Influence on Certified Parts

The term High Strength Low Alloy steel (HSLA) has been widely used to describe high strength steel used in manufacturing automotive body parts; however, HSLA is not well defined and there is well accepted no universal standard available. Different countries seem to have different definitions on this type of steel. For instance, in SAE specification (J1392), high strength steel has yield strength no lower than 35 KSI and carbon content between 0.13 to 0.25 percent; however, many drawing grade high strength steel produced in Japan for automotive application shows tensile strength as low as 24.2 KSI and carbon content specified as low as 0.12 percent or even 0.008 percent or lower. In the other way, there are steel that metal chemistry in line with SAE carbon steel grade but shows strength as high as high strength steel. Practically, while current available standards give a broad range of tolerance and overlap with each other, without physical property tests, metal chemistry analysis cannot precisely indicate the type of steel.

The CAPA Technical Committee decision, made two years ago, limited the extent of material analysis and decided to leave manufacturers to justify the substitutions of high strength steel. While DTL is restricted to run necessary tests, test reports only can indicate the possibility of HSLA that OEM uses on their parts. In this situation, DTL could not reject an inspection based on an unpossitive result and manufacturer would not assume the responsibility to run extensive tests to verify the material OEM uses. Now, there are certified parts in this status that OE sample is suspected to be high strength steel but certified part is mild steel.

It is necessary to bring to CAPA's attention on this situation and a reevaluation on the technical committee decision should be considered.

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