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A CWI UK worker

### SMDI Updates Guide Specification for Highway Bridge Fabrication With HPS

The Steel Market Development Institute (SMDI), a business unit of the American Iron and Steel Institute (AISI), has published an updated version of Guide Specification for Highway Bridge Fabrication With HPS 100W (HPS 690W) Steel for Non-Fracture Critical Applications, which is available for free download on their website at [www.smdisteel.org](http://www.smdisteel.org). The document provides bridge owners, designers and fabricators with the latest recommended methodology to fabricate and weld structures using ASTM A709 or AASHTO M270, Grade HPS 100W (HPS 690W) steel.

High Performance Steel (HPS) was developed primarily for the bridge girder fabrication industry. It is designed to have improved mechanical properties in the heat-affected zone (HAZ), improving the HAZ toughness and providing superior resistance to cracking. The guide recommends procedures for fabricators to achieve high-quality welds using HPS 100W steel.

Guide Specification for Highway Bridge Fabrication With HPS 100W (HPS 690W) Steel for Non-Fracture Critical Applications includes certain

consumables for submerged arc welding (SAW), shielded metal arc welding (SMAW), flux cored arc welding (FCAW), and gas metal arc welding (GMAW) processes. It is based on continuing research with HPS fabrication and welding practices conducted under a cooperative agreement sponsored by the Federal

Highway Administration, the U.S. Navy, and SMDI. Led by Lon Yost, Consultant (retired from Lincoln Electric), the research was overseen by SMDI's Welding Advisory Group, a council of technical experts representing steel producers, fabricators, welding manufacturers, academia, government officials and related organizations that provide specification and code development, research, review of new technologies, and market development related to the welding of steel products. The guide is highly recommended for bridge professionals who currently work with steel or are interested in learning more about HPS bridges.

High Performance Steel made a rapid entry into the bridge industry. The first HPS 70W bridge was placed in service in December 1997, only three years after the onset of the cooperative research effort. Today, it is estimated there are more than 500 HPS bridges in service in almost every state in the U.S. ■