

Call for Participation

Joint Working Group for Digital Manufacturing

Baltimore, Maryland, USA
October 19 to 22, 2015

ISO 10303-238, more commonly known as STEP-NC AP238, was released as an ISO standard for numerical machine control in 2007. It enables the data exchange of model based machining data between CAM and CNC systems. Ten years of testing has shown that manufacturing using models is 15% more efficient. They make manufacturing tasks easier to understand, more adaptable, more flexible and easier to measure. Leading users are now deploying the technology as a key component of their next generation infrastructure for digital manufacturing. The goal of STEP-NC AP238 Edition 2 is to add enhancements so that users can combine additive and subtractive machining, measure in-process models, machine and measure using robots, share very large models between CAD, CAM and CNC systems, and deliver interoperable product manufacturing information to their supply chains.

For the second edition, the title of STEP-NC AP238 is being changed to “an integrated model for digital manufacturing”. To facilitate the development we are calling for interested participants to come together to form a joint working group. They may include TC184/SC1 for machining processes, TC184/SC2 for robotics, TC184/SC4 for product modeling, TC29 for cutting tools, TC39 for machine tools and TC261 for additive manufacturing. We ask you to contact, Dr. Martin Hardwick at hardwick@steptools.com for further information, and to participate at the next TC184/SC4 meeting in Baltimore, USA from October 19 to 22, where a first draft of the new standard will be presented.

Meeting Schedule

Day 1 – Monday October 19: A review of edition 1 and the technical enhancements made during ten years of testing. These include the addition of semantic tolerances, the addition of machine tool kinematics, the addition of tessellated models, and the addition of cutting tool parameters as defined by ISO 13399

Day 2 – Tuesday October 20: A discussion of the additional technical features that industry would like to include in Edition 2. They may include enhancements to support additive manufacturing, robot machining, interactive real-time measurement, very large models and other capabilities.

Day 3 – Wednesday October 21: A day of industry demonstrations to highlight the capabilities of ISO 10303-238 STEP-NC. These will include the use of cloud services to develop and optimize machining solutions, the use of virtual CMM's to validate the conformance of a process to its design tolerances, the integration of additive and subtractive processes, and the integration of STEP-NC with external standards such as MTConnect for process monitoring, and ROS-I for robot machining.

Day 4- Thursday October 22: A review of the action items for the development of the new edition.