International Standards Organization
Joint Working Group for Digital Manufacturing

Inaugural Meeting

October 19th – 22nd, 2015
Pier 5 Hotel, Baltimore, USA

DAY 1 MONDAY OCTOBER 19TH – DISCUSSIONS ON INDUSTRY REQUIREMENTS
FOR REGISTRATION HTTP://WWW.ECCMA.ORG/2015TC184SC4/

08:00AM	**ISO TC184/SC4 Plenary Meeting**
10:00AM	Break
10:30AM	**Requirements from ISO Standards**

1. *STEP-NC AP238*
2. *STEP-NC ISO 14649*
3. *Cutting Tools ISO 13399*
4. *STEP AP242 Editions 1 & 2*

12:00PM	Lunch
01:00PM	**Requirements from Industry Solutions**

1. *ISO 261 Additive Manufacturing AMF*
2. *Machine Tool Monitoring MTConnect*
3. *CMM Measurement QIF*
4. *Quality Assurance PPAP*
5. *Korea Projects*
6. *Japan Projects*

03:00PM	Break
03:30PM	**Requirements for Digital Manufacturing**

1. *Milling and Turning*
2. *Cutting Tools and Fixtures*
3. *Machine Tools*
4. *Additive Manufacturing*

05:00PM	Close

DAY 2 TUESDAY OCTOBER 20TH – DISCUSSIONS ON TECHNICAL SOLUTIONS

FOR REGISTRATION HTTP://WWW.ECCMA.ORG/2015TC184SC4/

08:00AM	**Summary of Day 1 Requirements and Goals** 1. *Product requirements* 2. *Process requirements* 3. *Resource requirements* 4. *Measurement requirements* 5. *Monitoring requirements* 6. *Quality Assurance requirements*
10:00AM	Break
10:30AM	**UUIDs and Part 21 Edition 3** 1. *Anchors and References* 2. *EXPRESS constants* 3. *ZIP files and Digital Signatures* 4. *Linking to other standards*
12:00PM	Lunch
01:00PM	**AP242 and Modules** 1. *AP242 Edition 1* 2. *AP242 Edition 2* 3. *Advantages and disadvantages of Modules*
03:00PM	Break
03:30PM	**Round Hole Test Case** 1. *Feature definition* 2. *Operation definition* 3. *Cutter definition* 4. *Solution definition*
05:00PM	Close

DAY 3 WEDNESDAY OCTOBER 21ST – *INDUSTRY DAY PRESENTATIONS*
FOR REGISTRATION HTTP://WWW.ECCMA.ORG/2015TC184SC4/
Technology demonstrations will be given during the breaks

08:00AM   **TC 184/SC4 Plenary Meetings**

09:00AM   **Industry Testing of Digital Manufacturing**
                 1. USA Projects (AP238 and STEP-Manufacturing)
                      ❖ *David Odendahl, Boeing Airplane*
                 2. EU Projects (ISO 14649)
                      ❖ *Aydin Nassehi, University of Bath*

10:00AM   Break – Technology demonstrations

10:30AM   **Industry Requirements for Digital Manufacturing**
                 3. Additive Manufacturing Requirements (TC 261)
                      ❖ *Corey Dickman, Penn State & America Makes*
                 4. Quality Assurance Requirements (PPAP)
                      ❖ *Mikael Hedlind, Scania*
                 5. Design Requirements (Industry 4.0 and AP242)
                      ❖ *Max Ungerer, ProSTEP*

12:00PM   Lunch

01:00PM   **Digital Manufacturing Applications**
                 1. Eliminating the post processor
                      ❖ *Andy Byrd, Okuma*
                 2. Enabling cloud services
                      ❖ *Dan Finke, Penn State*
                      ❖ *Graham Hemingway, Vanderbilt*
                 3. Integration with measurement devices
                      ❖ *Larry Maggiano, Mitutoyo*
                 4. Machining more efficiently
                      ❖ *Bengt Olsson, Sandvik*
                      ❖ *Tom Raun, Iscar Metals*

03:00PM   Break – Technology demonstrations

03:30PM   **Getting Started Projects**
                 1. Process Optimization and STEP-NC Simulation
                      ❖ *David Loffredo, STEP Tools*
                 2. MTConnect and 3D Machine Tool Monitoring
                      ❖ *Sid Venkatesh, Boeing Airplane*
                      ❖ *Will Sobel, System Insights*

3. *AP242 Translation to enable QIF Measurement*
    ❖ *Asa Trainer, ITI*
4. *CNC Programming using the STEP-NC DLL*
    ❖ *Martin Hardwick, STEP Tools, Inc.*

05:00PM   Close

06:00PM   **Technology demonstrations close**
                 In break room

TBD   Social Event

DAY 4 THURSDAY OCTOBER 22ND – *CLOSE OUT*
FOR REGISTRATION HTTP://WWW.ECCMA.ORG/2015TC184SC4/

08:00AM	**Unfinished Business**
10:00AM	Break
10:30AM	**Review of Action Items**

1. *Action items*
2. *Logistics for next meeting*
3. *Any other business*
4. *Close of JWG*

12:00PM	Lunch
01:00PM	**Part 21 Edition 3 Issues**
03:00PM	Break
03:30PM	**ISO TC184/SC4 Meetings**
05:00PM	Close