# Joint Working Group for Digital Manufacturing

## **Inaugural Meeting**

October 19<sup>th</sup> – 22<sup>nd</sup>. 2015 Pier 5 Hotel, Baltimore, USA

DAY 1 MONDAY OCTOBER 19<sup>TH</sup> – DISCUSSIONS ON INDUSTRY REQUIREMENTS

- ISO TC184/SC4 Plenary Meeting 08:00AM
- 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 20<sup>TH</sup> – DISCUSSIONS ON TECHNICAL SOLUTIONS

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

05:00PM Close

### DAY 3 WEDNESDAY OCTOBER 21<sup>ST</sup> – INDUSTRY DAY PRESENTATIONS

#### Technology demonstrations will be given during the breaks

| 08:00AM | TC 184/SC4 Plenary Meetings  |  |
|---------|--|--|
| 10:00AM | Break – Technology demonstrations  |  |
| 10:30AM | <ul> <li>Industry Requirements for Digital Manufacturing</li> <li>1. USA Projects (STEP-Manufacturing)</li> <li>2. EU Projects (ISO 14649, Industry 4.0 and AP242)</li> <li>3. Far East Projects (Japan and Korea)</li> </ul>          |  |
| 12:00PM | Lunch  |  |
| 01:00PM | <ul> <li>Digital Manufacturing Applications</li> <li>1. Eliminating the post processor</li> <li>2. Enabling cloud services</li> <li>3. Integration with measurement devices</li> <li>4. Making machining 15% more efficient</li> </ul> |  |
| 03:00PM | Break – Technology demonstrations  |  |
| 03:30PM | <ul> <li>Getting Started Projects</li> <li>1. Tooling Optimization</li> <li>2. MTConnect Integration</li> <li>3. QIF Measurement</li> <li>4. Tamper Proof Machining</li> </ul>   |  |
| 05:00PM | Close  |  |
| 06:00PM | Technology demonstrations<br>In break room   |  |
| TBD     | Social Event   |  |

## DAY 4 THURSDAY OCTOBER 22<sup>ND</sup> – CLOSE OUT

| 08:00AM | Unfinished Business  |
|---------|--|
| 10:00AM | Break  |
| 10:30AM | <ul> <li>Review of Action Items</li> <li>1. Action items</li> <li>2. Logistics for next meeting</li> <li>3. Any other business</li> <li>4. Close of JWG</li> </ul> |
| 12:00PM | Lunch  |
| 01:00PM | Part 21 Edition 3 Issues   |
| 03:00PM | Break  |
| 03:30PM | ISO TC184/SC4 Meetings   |
| 05:00PM | Close  |