AFNeT – prostep ivip STEP AP242 Day

17 October 2018

Airbus, Toulouse

Presentation by STEP Tools, Inc.

CAD functional capabilities supported by the STEP AP242 interface

Product ST-Developer

	CAD information	Implementation Format		Level of implementation		
		P21- AIM	XML BO M.	Pilot	IF test	COTS
3D geometry	**3D exact BREP representation**	X				X
	3D tessellated BREP representation	X				X
	presentation (color, layers, transparency, invisibility, etc)	X				X
3D Product & Manufacturing Information - PMI (GD&T, 3D annotations, 3D symbols, UDA)	**graphic presentation**	X				X
	semantic representation	X				X
Assembly structure	**1 STEP file with assembly structure and 3D geometry**	X				X
	1 assembly with references to CAD 3D files)	X			X	
	nested assembles with references to CAD 3D files)	X		X		
Kinematics	**Motion**	X				X
	Mechanism	X				X
Composite design	**Ply definition based on exact surface**					
	Ply definition based on 3D tessellated solid BREP					
Electrical Wiring Harness	**Topology (AP242 ed2 DIS)**					
	Wire list (AP242 ed2 DIS)					
STEP compressed file		X				X
Validation Properties	**3D geometry, PMI, assembly structure, composite**	X				X

Additional information on the version(s) of the COTS AP242 interface: to be described by the PLM vendor – PLM integrator

PDM functional capabilities supported by the STEP AP242 interface

Product XXX

PDM information	Implementation Format		Level of implementation		
	P21- AIM	XML BO M.	Pilot	IF test	COTS
"As Designed" PDM product structure					
Nested PDM product structure					
Assembly validation properties					
Lifecycle management					
Document structure					
Person and organization					
Date and Time					
Classification					
Material properties					
Customized PDM properties					
Configuration management - based on effectivities					
Configuration management - based on specifications					

N/A

Additional information on the version(s) of the COTS AP242 interface: to be described by the PLM vendor – PLM integrator

Manufacturing capabilities supported by the STEP AP238 interface

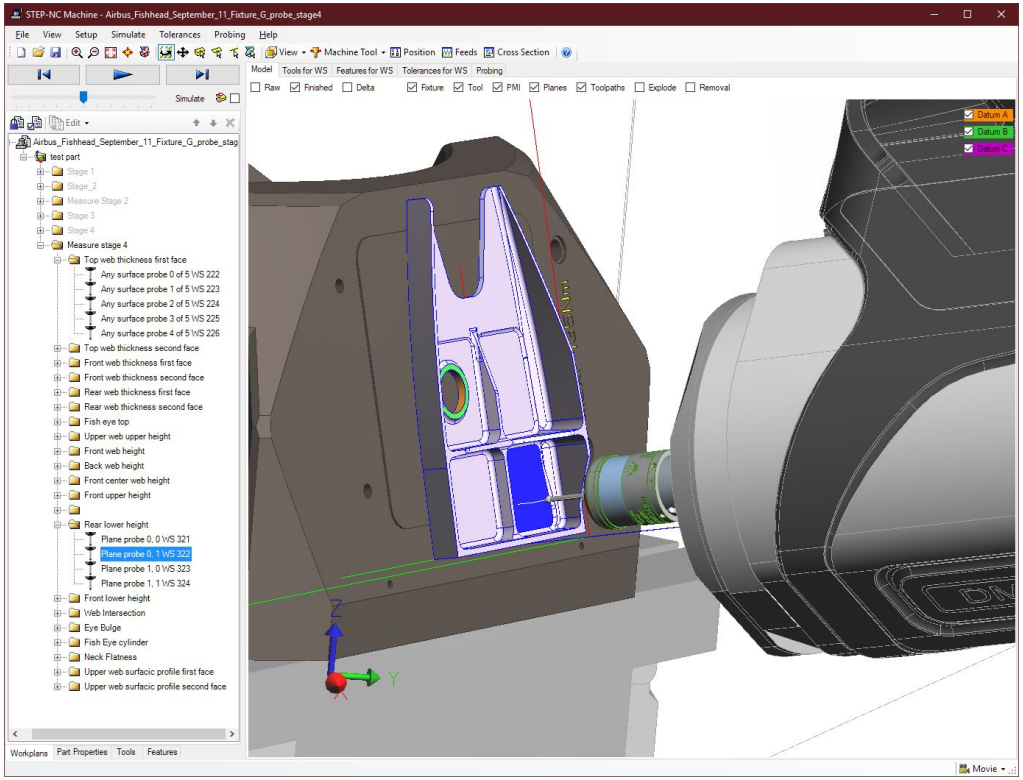
Product STEP-NC Machine

	CAM information	Implementation Format		Level of implementation		
		P21- AIM	XML BO M.	Pilot	IF test	COTS
Project structure	**Program structure**	X				X
	Process data	X				X
	CAM operations	X				X
Manufacturing constraints	**graphic presentation**	X				X
	semantic representation	X				X
Workpiece structure	**Workpiece setup**	X				X
	AP203/AP214 import and export	X				X
	AP242 import and export	X				X
Machine Kinematics	**3-axis and 5-axis motion**	X				X
	MCD generation	X				X
Process simulation	**Tool path volume removal**	X				X
	Tool path collision detection	X			X	
Process validation	**On-machine measurement**	X			X	
	Off-machine measurement	X		X		
MTConnect monitoring	**Real time process simulation**	X			X	
QIF reporting	**Real time process validation**	X			X	

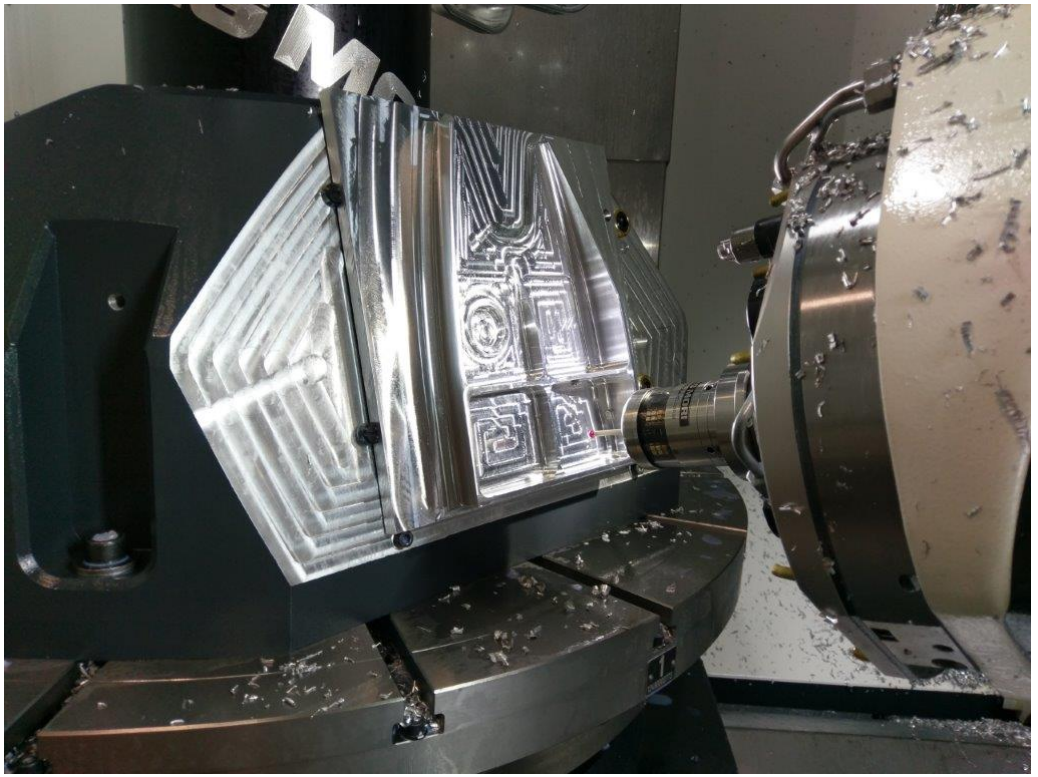
Additional information on the version(s) of the COTS AP238 interface: to be described by the PLM vendor – PLM integrator

On machine measurement of AP242 semantic GD&T

CATIA v5 export as AP242 workpiece, Siemens NX export as AP238 process



STEP-NC Explorer



DMG Model 100

MERCI DE VOTRE ATTENTION

Martin Hardwick
STEP Tools, Inc.
hardwick@steptools.com