Applying the Knowledge Aware Technique within CAD Applications

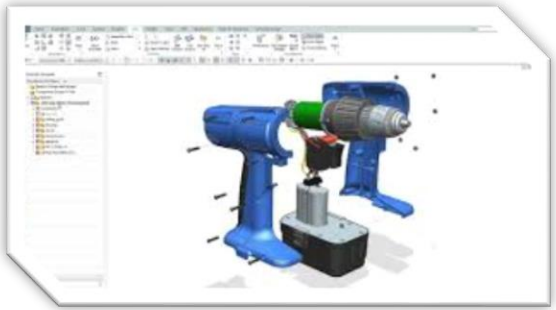
September 25, 2019

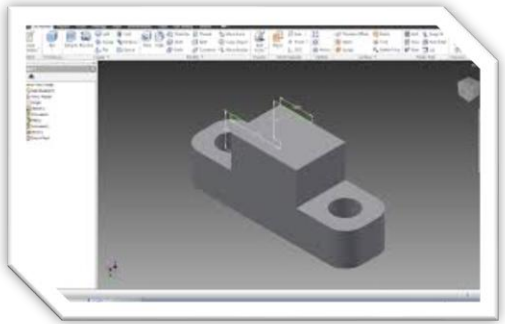
auros


101 NORTH
0.1 mi
Civic Center
Bayshore Blvd
101
Alemany Blvd

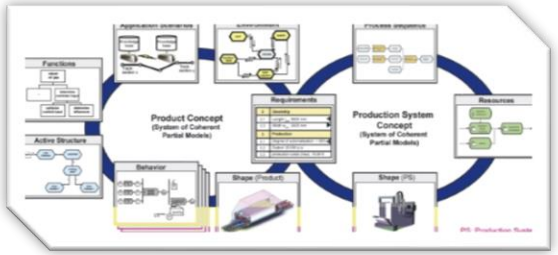
Model Based Engineering

Product Models



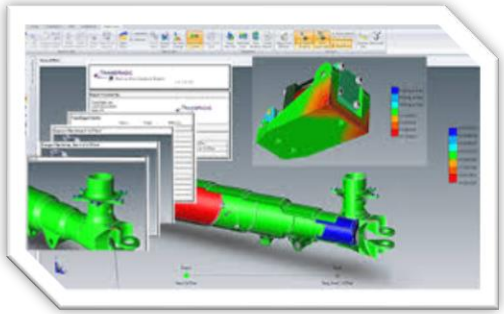


Design Models



System Models

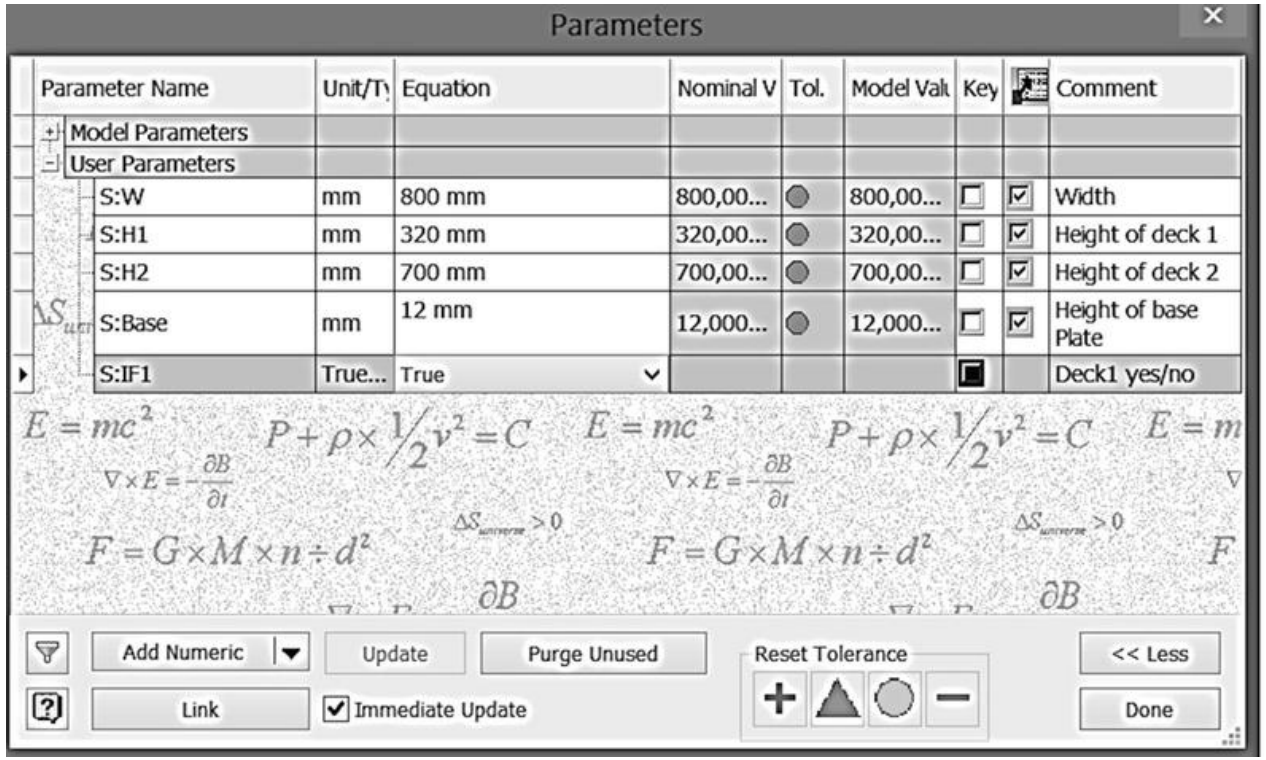
Manufacturing Models

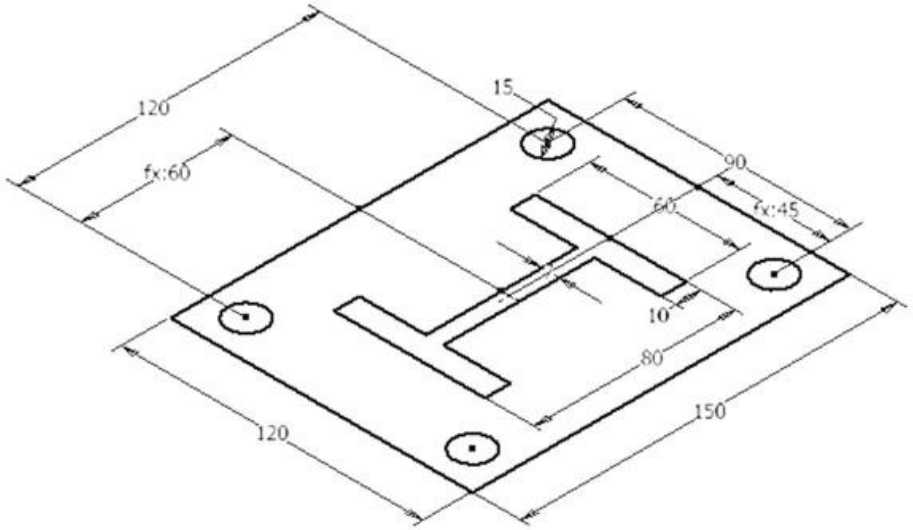


Validation Models

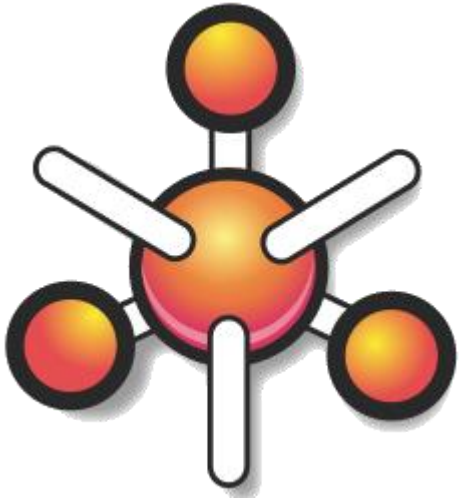
Operational Models

Knowledge Based Engineering (KBE) vs Knowledge Aware





Fundamental Enabling Technologies



Knowledge Packet

Rule Processing Engine

Assessment Control

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Knowledge Packet

K-PAC Detail View - Google Chrome

Not secure | nt2.aurosks.com/auros/kpac/view/DEMO-2#details

DEMO-2 Desired Engagement of console locator Pins to Hinge

Product Design Standard

Details | Relations | Teams | Discussions

v2

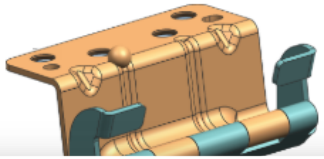
Description

Desired Engagement of console locator Pins to Hinge. Minimum and Maximum engagement length of locator.

The location feature must be at least 45% of the part thickness but no more than 60% of the part thickness.

Design the locating feature to make contact with the mating component with the prescribed minimum engagement (plus chamfer) before any other contact during sub-assembly.

Additional Information



BASIC PRINCIPLES OF LOCATING
To perform properly, workholders must accurately and consistently position the workpiece relative to the cutting tool, part after part.
To accomplish this, the locators must ensure that the workpiece is properly referenced and the process is repeatable.

Value Table

Min Locator Pin Engagement	Max Locator Pin Engagement
0.45*part_thk	0.6*part_thk
Minimum mm loc_pin_engage	Maximum mm loc_pin_engage

Justification

K-PAC Type	Product Design Standard	Author	Boisvert, Steve(sboisve1)
K-PAC Status	Active	Contact	
Current Version Published Date		E2ks Core Template	Basic

Number of Results: 49

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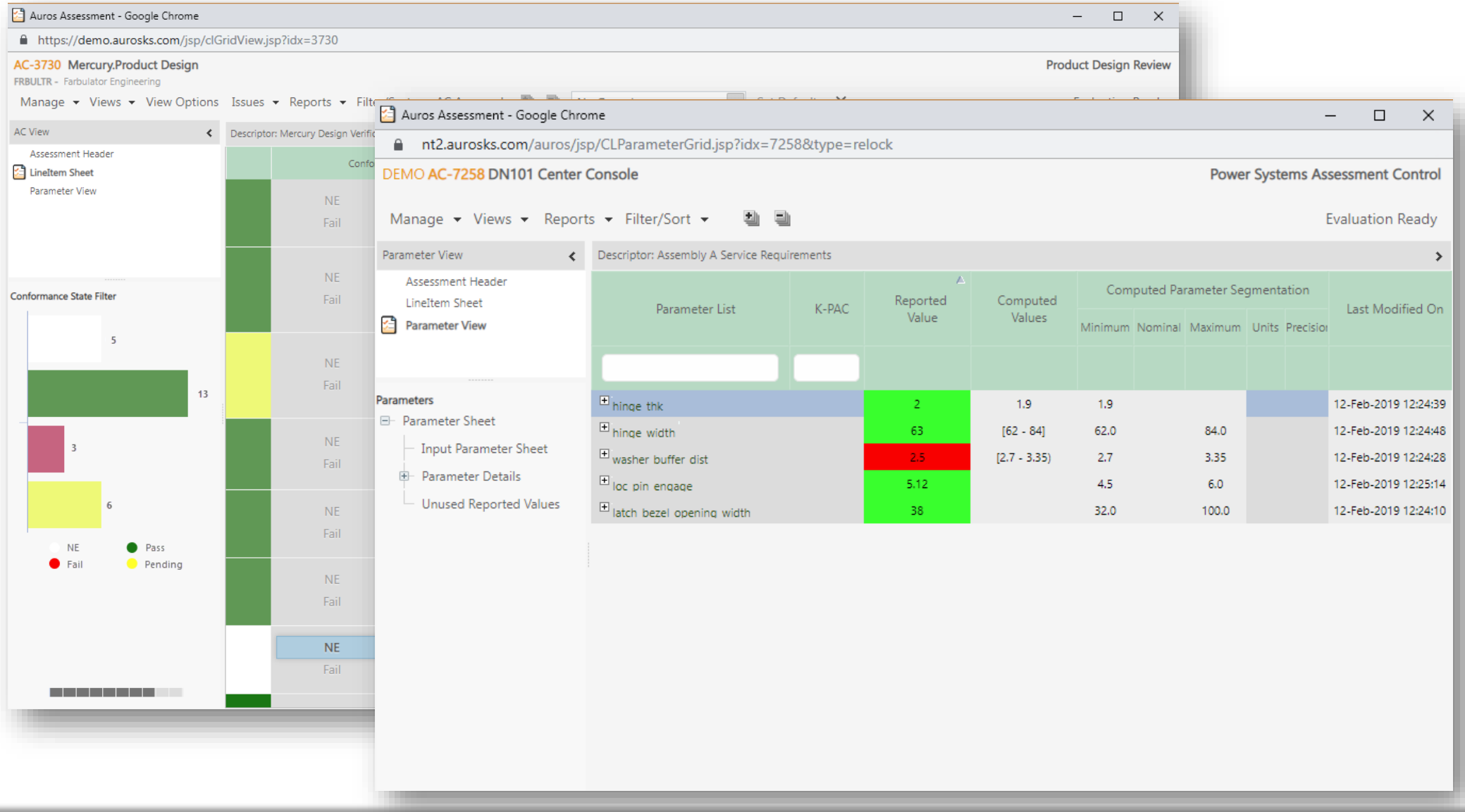
Assessment Control



Auros Knowledge Driven Model Based Process

Modeling Tool (Context)

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Context Information 1

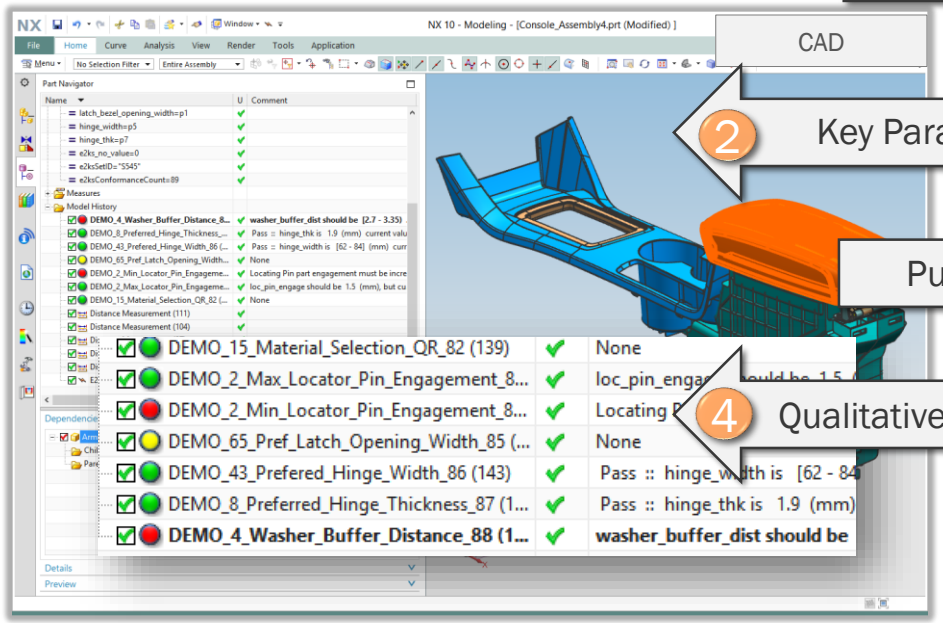
2 Key Parameters

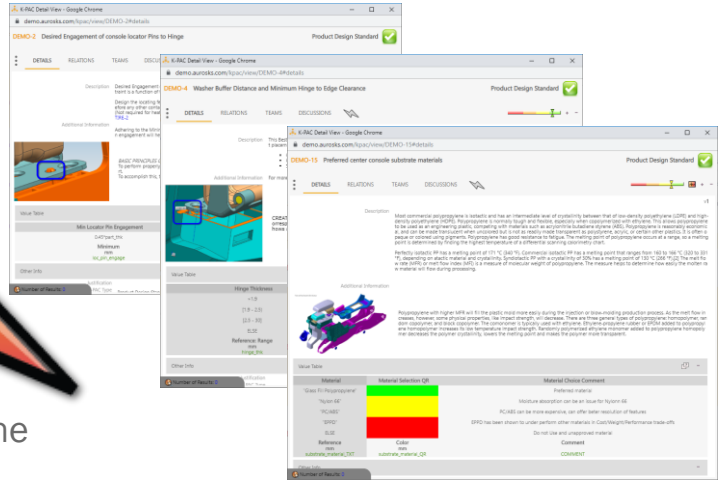
Published Values 3

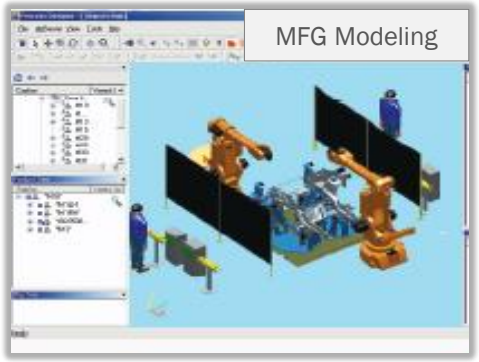
4 Qualitative Responses

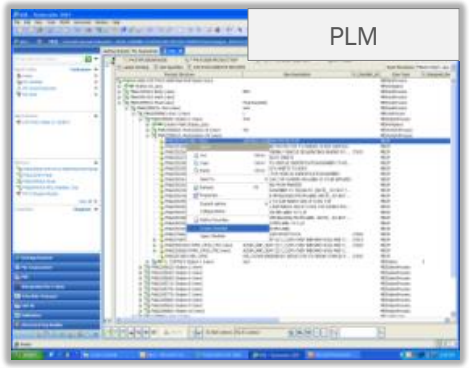
Rules Engine

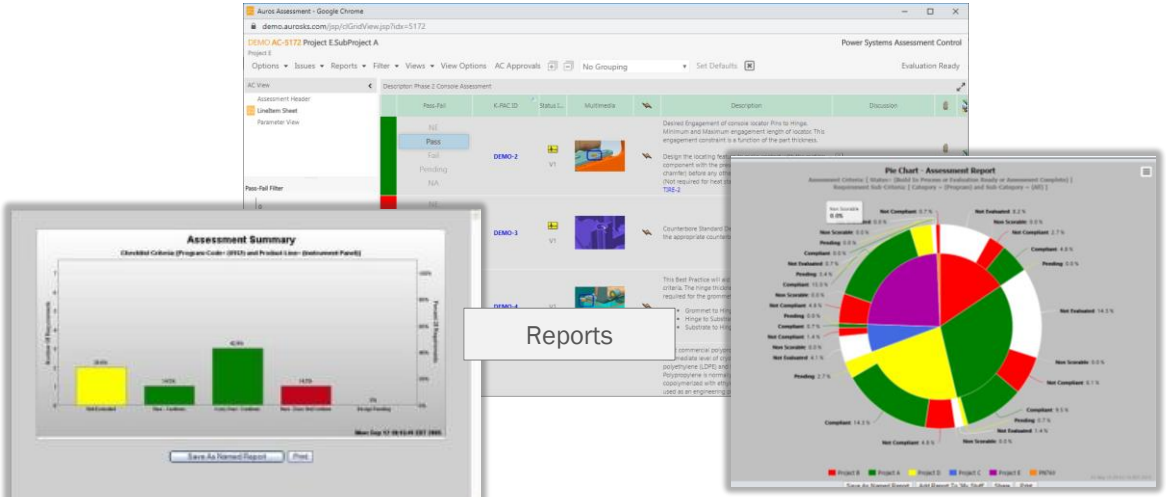
CAD



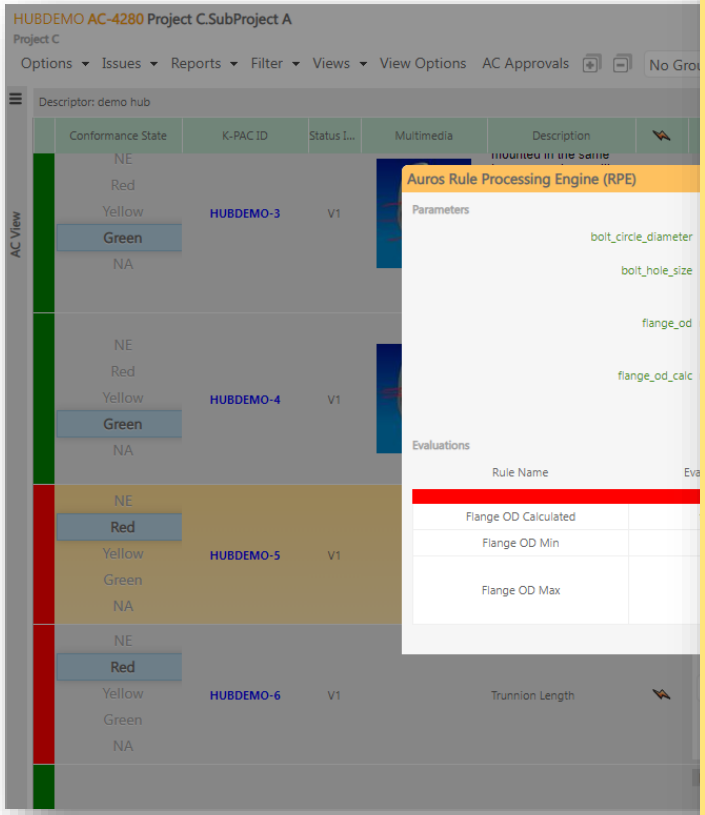


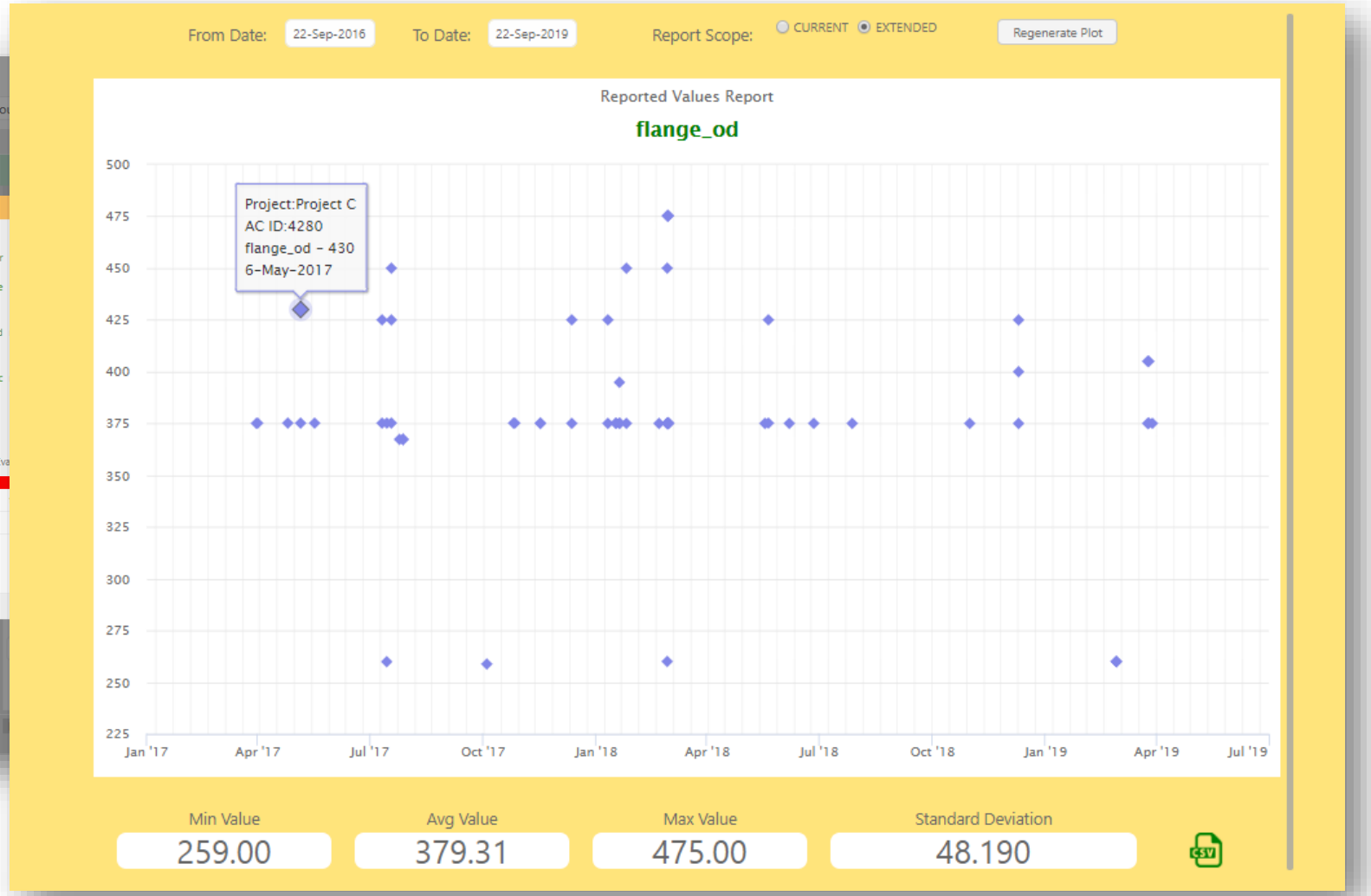






Parameter Report





Auros CAD Connector Strategies

Non-Parametric Model Validation

Free Form CAD

Template – Smart Part CAD

Automated Drawing / Model Validation with Proxy Parameters

- Dynamic delivery of key parameters and rules
- Real-time conformance reporting
- Imbedded knowledge references
- Closed loop learning
- Auto connect to Existing Parameter and Relations
- Introduce new / modified rules on the fly
- Real-time Web Conformance Reporting - Feedback


CATIA


SW
SolidWorks


NX


creo®


AutoCAD
SSI®


CATIA


SW
SolidWorks


NX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AutoCAD
SSI®

Non-Parametric Model Validation

Template – Smart Part CAD

Automated Drawing / Model Validation with Proxy Parameters

Knowledge Based Engineering (KBE) not the same as Knowledge Aware

Applicability of Knowledge Aware across Workflows

- Non-Parametric Model Validations
- Freeform CAD – (Not Shown)
- SMART Templates
- Automated Validations with Proxy Parameters

Benefits of Applying Knowledge Aware within CAD Applications

- Certainty on Knowledge Reuse
- Continuous Product Validation
- Closed Loop Enterprise Learning

Live Demonstrations Available

Knowledge Best Shared