



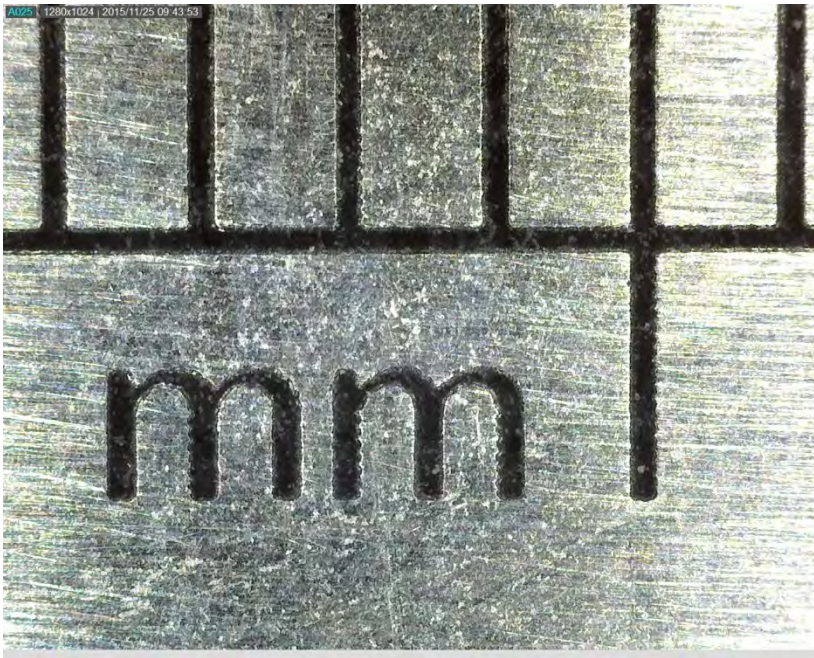
# MTS-Test Workmanship Standards

Workmanship Standards Number: 02-06

Rev: A

- 1.1 Name: Casting – Cast Aluminum – Smeared Material
- 1.2 Workmanship Standards Category: Metal Fabricated Materials
- 1.3 Purpose/Description (why/when/how): The existence of unacceptable smeared material creates risks to meeting cosmetic requirements of finished surfaces at subsequent operations.
- 1.4 Illustration: The following illustrations depict “Acceptable” and “Unacceptable” workmanship results.

## Workmanship Inspection Requirement



This image shows the resolution needed to achieve comparable reference images.

Picture taken at approximately 70x.



The use of a camera similar to that shown to the left is advantageous due to the plastic stand-off which controls the distance to the imaging surface.

A surface imaging microscope may be of equal use but may not provide for a permanent record.

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Workmanship Standards are minimum requirements and may be superseded by engineering drawings, purchase orders, and/or referenced specifications

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## Acceptable Workmanship

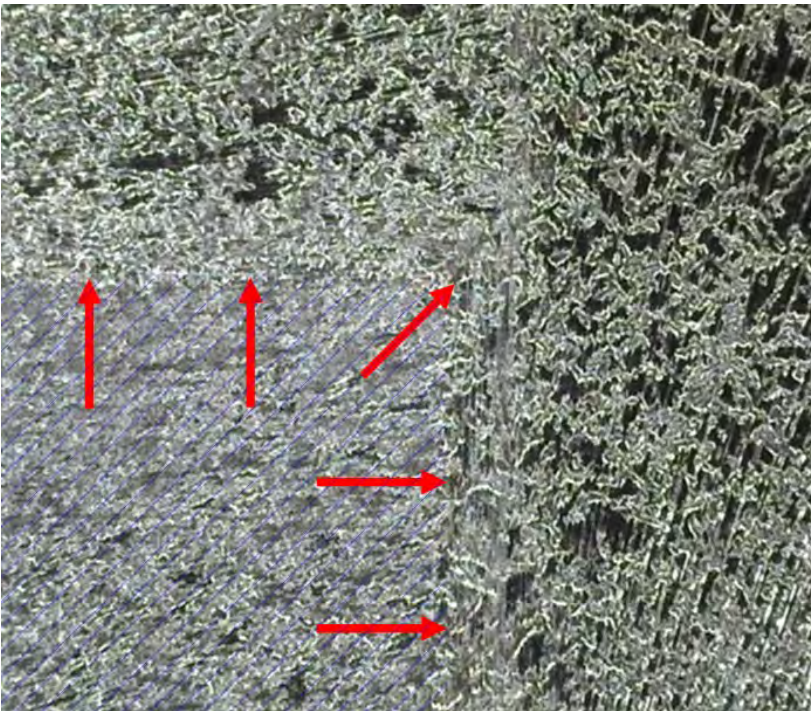
## Acceptable Notes



The image below shows the surface of an **acceptable** machined surface.

The machine tooling marks are evident as lines sweeping horizontally across the image. Minor artifacts of the material structure are visible indicating a clean surface of the material.

Picture taken at approximately 70x.



The image shows two areas of the machined surface of interest. One section in the lower left is annotated with blue diagonal lines and is meant to be excluded from consideration. The areas to the top and the right are areas of interest to compliment the image shown above.

Picture taken at approximately 70x.



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## Unacceptable Workmanship

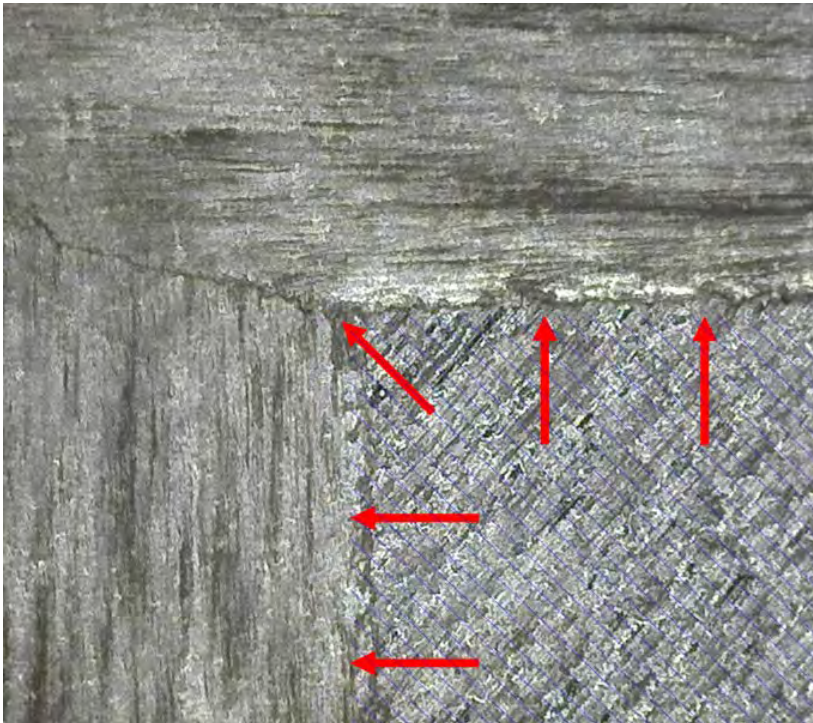
## Unacceptable Notes



The image below shows the surface of an unacceptable machined surface.

This surface was found to be unacceptable due to the smeared metal. Additional image shown below for further reference.

Picture taken at approximately 70x.



The image shows two areas of the machined surface of interest. One section in the lower right is annotated with blue diagonal lines and is meant to be excluded from consideration. The areas to the top and the left are areas of interest to complement the image shown above.

Picture taken at approximately 70x.



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## 2 REVISION HISTORY & APPROVAL

REVISION HISTORY			
Rev	Description of Change	Author	Effective Date
A	Initiated	Jack Borgeson	2/12/2016

APPROVAL OF CURRENT REVISION		
Name / Function	Signature	Date
Stephen Jordheim / Workmanship Standards Process Owner	(approval on file)	
Dave Winslow / Workmanship Standards Co-Pilot	(approval on file)	
Tom Bannon / Director of Global Sourcing	(approval on file)	

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