



**Summary of Substantive Changes  
between the 2017a and the 2019 editions of  
ASTM F2389 “Pressure-rated Polypropylene (PP) Piping Systems”**

**Presented to the IAPMO Standards Review Committee on May 18, 2020**

**General:** The changes to this standard may have an impact on currently listed products. The substantive changes are:

- Increased the material requirements categorized required strength, specified requirements for PP-R and PP-RCT, and added ISO 12162 as the reference testing Standard (see Section 5.5)

Section 2, Referenced Documents: Reference standards were added as follows:

[ISO 12162 Thermoplastics materials for pipes and fittings for pressure applications - Classification, designation and design coefficient](#)

Section 5.5, Categorized Required Strength ( $CRS_{\theta,t}$ ): Increased the material requirements categorized required strength, specified requirements for PP-R and PP-RCT, and added ISO 12162 as the reference testing Standard as follows:

**5.5 Categorized Required Strength ( $CRS_{\theta,t}$ )**—The PP-R material used in the pipe and fittings shall have a minimum  $CRS_{\theta,t, 70\text{ }^{\circ}\text{C}, 50\text{ years}}$  value of ~~280~~ 457 psi (~~1.93~~ 3.15 MPa) and the PP-RCT material used in the pipe and fittings shall have minimum  $CRS_{70\text{ }^{\circ}\text{C}, 50\text{ years}}$  value of 725 psi (5 MPa) in accordance with ISO 12162, based on testing in accordance with ISO 9080 and classification of the lower confidence limit ( $\sigma_{LCL}$ ) at ~~180~~158 °F (~~82~~70 °C) and 50 years.