



*Commanding a Higher Standard<sup>SM</sup>*

## THE PHOENIX FORGE GROUP

1020 MACARTHUR ROAD, READING, PA 19605-9404  
(610) 374-3117 • FAX: (610) 374-5211

### PRODUCT SPECIFICATION BULLETIN

#### CERTIFICATE of COMPLIANCE

#### **TRANS-O-CON® BRANCH OUTLET FITTINGS**

We hereby certify that the TRANS-O-CON® forged branch outlet fittings manufactured by the Phoenix Forging Company conform to the requirements of the latest edition of MSS SP-97. These products are acceptable for use in sour service applications conforming to the applicable metallurgical and hardness requirements of requirements of NACE MR0175, NACE MR0103, and ISO 15156 and do not exceed a Rockwell hardness of C-22 or a Brinnell hardness of 187 HBW maximum.

We further certify that these products fully conform to the chemical and mechanical requirements of the latest edition and addenda of ASTM/ASME A105/SA105. These products conform to the applicable requirements of CSA-B51, ASME B31.1, B31.3, B31.8, and ASME Section VIII, Division 1 Boiler and Pressure Vessel Codes.

The carbon equivalent of these products does not exceed the 0.47 maximum carbon equivalent value specified in supplementary requirement S.4 of ASTM A105. The steel that was used to make these fittings was fully killed during the steel making process using fine-grained melting practice. Material test reports are retained at the Phoenix Forging Company and available upon request. As specified by ASTM A105, round specimens were used during tensile testing to establish the basis of the minimum elongation criteria of 22%. The yield stress measurements were taken at .2% offset method on the stress-strain curve as specified by ASTM E-8.

These products are capable of passing a hydrostatic test compatible with the one and one-half times the rating of the finished part. The ends of all butt weld branch connections conform to the latest edition of ASME B16.9. The threads of all threaded branch connections conform to the latest edition of ASME B1.20.1. The socket weld ends of all socket-welding branch connections conform to the latest edition of ASME B16.11.

We certify that these Phoenix Forging Company products are manufactured and inspected in the United States of America. The raw material for these forgings is melted in the United States of America or Canada only. All measuring and test equipment used for acceptance of these products fully conform to specified requirements and have been calibrated in accordance with MIL-STD-45662, ANSI/NCSL Z540-1-1994, and ISO 10012-1.

These products are manufactured in accordance with the Phoenix Forging Company Certified Quality System Program conforming to ISO 9001:2008. These products are inspected by independent quality control personnel conforming to the requirements of EN 10204 Section 3.1. These products were not exposed to mercury or any other metal alloy that is liquid at ambient temperatures during processing or while in our possession.

These products do not include heavy metals (lead, mercury, cadmium, and hexavalent chromium) and brominated flame retardants (polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE) and fully comply with the European Directive EU 2011/65/EC RoHS requirements. We further certify that these products fully conform to the low lead Safe Drinking Water Act of 2014 and NSF 61 requirements containing less than 0.25% lead.

**Bulletin: B-20.00 Rev. 4 Date: 01/01/16 Approved: Guy Cuccio Title: Technical Services Mgr.**

**CAPITOL**  
manufacturing  
Crowley, LA, USA

**CAMCO**  
Fittings  
Crowley, LA, USA

**CapProducts LTD**  
Vanastra, ON, Canada

**CONDUIT**  
pipe products, co.  
West Jefferson, OH, USA

**PHOENIX**  
Castasqua, PA, USA