

1. SCOPE:

- 1.1 These requirements cover oxy-acetylene or other oxy-fuel-gas torches employed in operations such as welding, brazing and heating.
- 1.2 A torch to be considered a "Gas Saver Type" under this specification shall have an adjustable pilot flame and a suitable means of turning a preadjusted setting of oxygen and acetylene on and off as required (or desired), by means of an operating lever, or other hand operating medium, without disturbing the setting of the valve adjusting screw.
- 1.3 These requirements are based upon records of tests and field experience and are subject to revision as further experience and investigation may show to be necessary or desirable.
- 1.4 A device or product which complies to these requirements will not be acceptable if upon production tests, other features are found to impair the desired results.

2. CONSTRUCTION & MATERIALS: Devices of this type shall be of substantial construction and shall be made of material suitable for the purpose intended.

3. UNION CONNECTIONS:

- 3.1 Non-interchangeable union connections, not requiring gaskets, shall be provided with Ford Standard Hose Fittings.
- 3.2 The International Acetylene Association Standard shall be followed. This provides for left-hand thread on fuel gas fittings and right-hand thread on oxygen fittings.

4. VENTING OF HANDLES: Non-gas-carrying spaces in handles shall be vented.

5. VALVE STEMS: The valve stems of fuel gas control valves shall be so constructed that they cannot be removed by unscrewing them without removing the packing unit.

6. TIP ADAPTER END: The tip adapter end of the torch shall be designed in such a way as to use Ford Standard Tips.

7. WORKMANSHIP: The workmanship shall be such as to insure a degree of uniformity suitable for devices of this character.

8. MARKING:

- 8.1 These devices shall be marked with the name or registered trade-mark of the manufacturer and shall also be marked with the proper type or style designation as well as markings to indicate proper gas connections.
- 8.2 If a manufacturer produces or assembles torches at more than one factory, each torch shall have a distinctive marking, which may be in code, by which it may be identified as the product of a particular factory.

9. PERFORMANCE:

9.1 NORMAL OPERATION TEST:

- 9.1.1 The devices shall, when connected to regulators supplying gases at required pressures, perform the normal operations as intended.
- 9.1.2 | For this test, the torch is connected to suitable sources
| of gas supply maintained at the pressures required, tips of
| various capacities are inserted and typical welding, brazing or
| heating operations, for which the torch is intended, are
| performed.

9.2 ABNORMAL OPERATION TEST:

- 9.2.1 | The devices, when subjected to abnormal and abusive conditions
| (conducive to the torch backfire or producing flashback), such
| as contact of the tip with fire brick, cold metal, wood and
| molten metal, shall not produce undue heating, dissociation of
| acetylene, or hazardous effects.
- 9.2.2 In this test, the torch is connected to gas supply sources by hose lines, each equipped with a short length of protected glass tubing. The gas pressures are maintained at values required, and the flame adjusted so as to be "neutral." Representative abusive and abnormal conditions are imposed. The tip is dragged over cold steel and fire brick. A puddle of molten steel is formed and the tip suddenly pushed down into it. A similar test is made over fire brick and the cavity allowed to increase in size until the flame is reflected back around the tip and head of the torch. The hose-line glass tubes are observed for evidence of flame.