

STOJAN STRAND BURNER SSB

APPARATUS FOR BURNING RATE MEASUREMENT OF SOLID ROCKET PROPELLANTS

The SSB™ (Stojan Strand Burner) is an improved version of Stojan Vessel® SV-2 apparatus for the determination of the burning rate of solid rocket propellants. SSB allows to conduct experiments using two different testing procedures: in constant volume or at quasi-constant pressure.

APPLICATIONS

The SSB is used for research and development, for manufacturing quality control or in-service surveillance of both double-base and composite solid rocket propellants. The method can reveal with high sensitivity and reliability the following factors influencing ballistic behavior of the tested propellants:

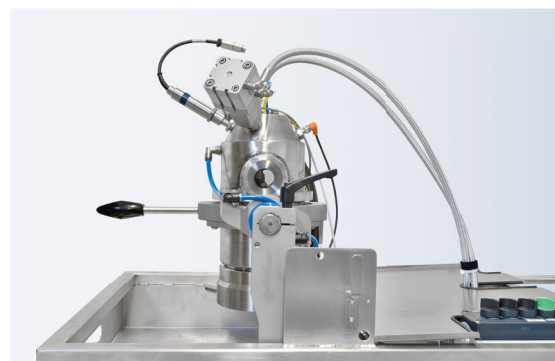
- ▶ Influence of additives (moderators, catalysts, binders, oxidizers etc.)
- ▶ Prediction of unstable burning or explosion hazards after ageing tests
- ▶ Dependence on initial temperature

ADVANTAGES & FEATURES

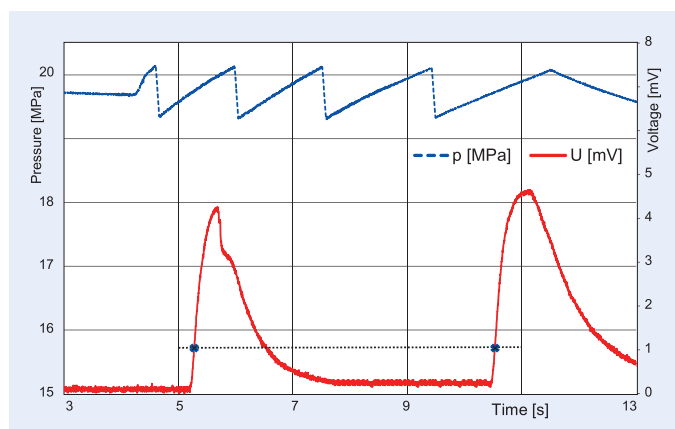
- ▶ 2 in 1 instrument: Stojan Vessel **SV-2** + Strand Burner (Crawford bomb)
- ▶ Working pressure up to 30 MPa (SB) or 50 MPa (SV)
- ▶ 75 MPa proof pressure tested by burning solid propellants
- ▶ Quick and safe operation, fully remotely controlled
- ▶ Design of the stainless steel vessel allows for easy cleaning of the solid residues
- ▶ Compact mobile working trolley with in-built chiller
- ▶ Testing vessel with two opposite windows on the side is available upon request

COMPLIANCE

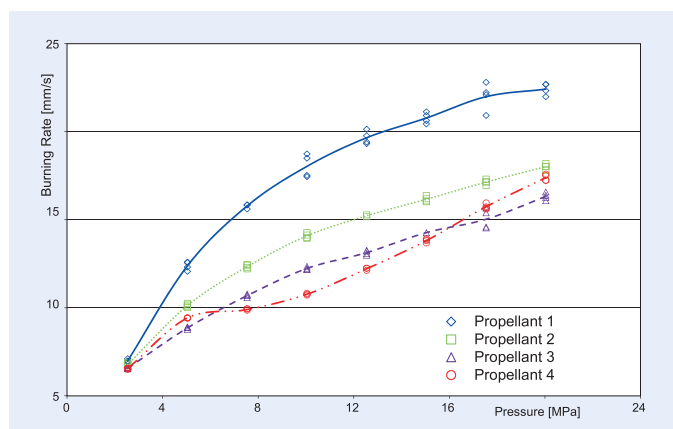
- MILD-STD-286C



Testing vessel with two opposite windows (upon request)



Example of pressure oscillations (upper) and voltage signal from thermocouples (bottom) for Strand Burner mode



Example of burning rates measured using Strand Burner mode



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