

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.



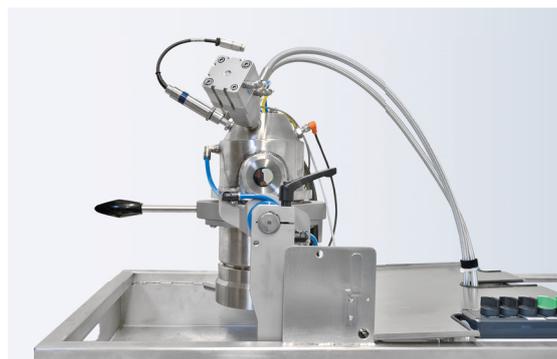
APPLICATIONS

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

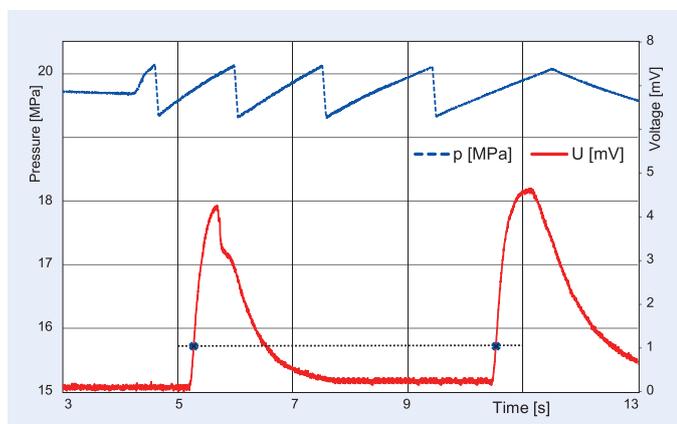
- ▶ 2 in 1 instrument: Stojan Vessel SV-2 + Strand Burner (Crawford bomb)
- ▶ Working pressure up to 30 MPa (SB) or 50 MPa (SV)
- ▶ 75 MPa proof pressure tested by burning solid propellants
- ▶ Quick and safe operation, fully remotely controlled
- ▶ Design of the stainless steel vessel allows for easy 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



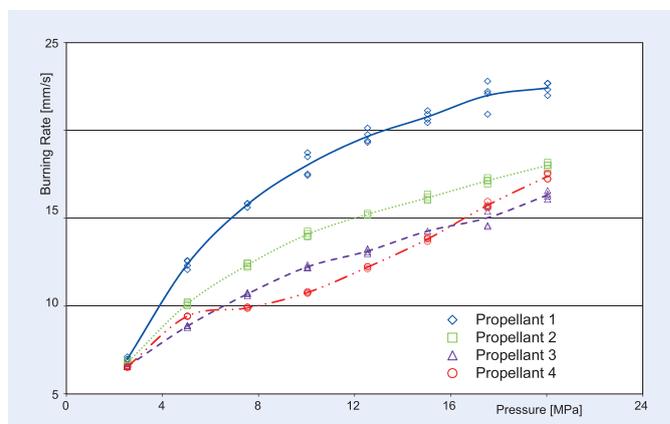
Testing vessel with two opposite windows (upon request)

COMPLIANCE

- MILD-STD-286C



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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