VELOREX PDV

PHOTONIC DOPPLER VELOCIMETER

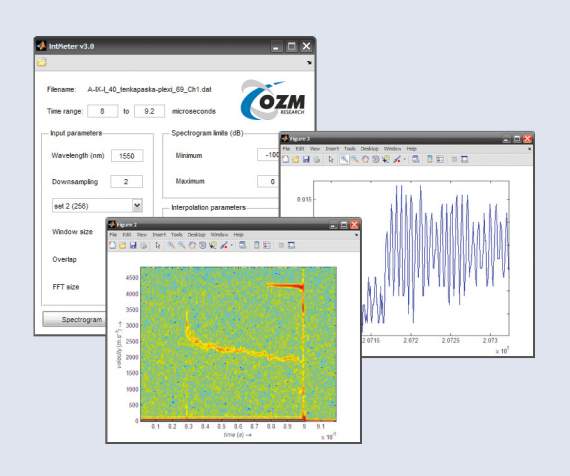
The VeloreX PDV™ is an advanced instrument used for the measurement of the continuous velocity-time profiles of high speed moving objects. It can be used for the determination of various detonation properties of energetic materials as well as for any other tasks where high precision in velocity or displacement measurements are crucial.

The VeloreX PDV is capable of tracking target velocities in order of kilometers per second with nanosecond time resolution. The measurement procedure is simple and robust with practically no constraints regarding the quality of the target surface. The use of the instrument is not limited to the characterization of explosives but includes ballistics, rocket motors, explosive welding, high energy physics, plasma physics, construction and engineering.

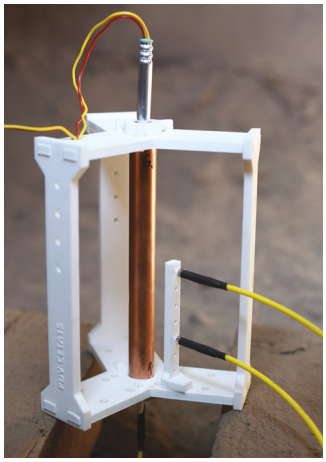
APPLICATIONS

The measurement of the velocity profiles of explosively accelerated materials can be used for inferring the key properties of the high explosives. Unlike the traditional Hess or Kast tests, which are used for the relative determination of brisance, the **VeloreX PDV** allows direct measurement without the need of an immediate comparison with standard samples. Compared to the piezoelectric pin or high-speed streak camera instrumentation, the **VeloreX PDV** offers dramatically increased measurement resolution.

The **VeloreX PDV** is especially useful for civilian and military research and the development of explosives and explosive devices. It may also be employed in quality control or the qualification of ammunition. In the research of explosives the measurement of velocity profiles of explosively accelerated materials can be used for inferring key properties of high explosives such as detonation pressure, particle velocity, the Gurney energy and the parameters of Jones-Wilkins-Lee equation of state of detonation products.



IntMeter evaluation software



Cylinder expansion test assembly

ADVANTAGES & FEATURES

- Up to 4 measurement channels
- Maximum velocity limit tailored according to the customer's needs (up to 10 km/s)
- Various probes available for a wide range of applications
- Advanced trigger options
- Eye safety thanks to all-fiber design
- Simple operation and evaluation

OZM Research s.r.o.
Bliznovice 32, 538 62 Hrochuv Tynec
CZECH REPUBLIC / European Union
Tel.: +420 469 692 341
Mobile: +420 608 742 777
E-mail: ozm@ozm.cz
www.ozm.cz

VER.1.0