SAFE LOAD
testing technologies

INNOVATE
SIMULATE
OPTIMIZE

innVision

Artificial Vision Measuring System

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Introduction

innVision is an innovative analysis software used to detect load deformation & validate load stability. With the high-speed camera and software, analysis time is greatly reduced to just a few mouse clicks.

innVision ST is the semi-automatic version for load stability and deformation measuring. The system takes a series of photos that the user can analyze to determine the point of deformation of the test unit. **Included with the innSlide family.**

innVision PRO is the fully automatic version for load stability and deformation measuring. The system takes a series of photos, automatically analyzes them, and demonstrates the deformation points – saving valuable analysis time.

Compatible Standards

European Safe Logistics Association
EUMOS

40509

Used to create reports for load verification

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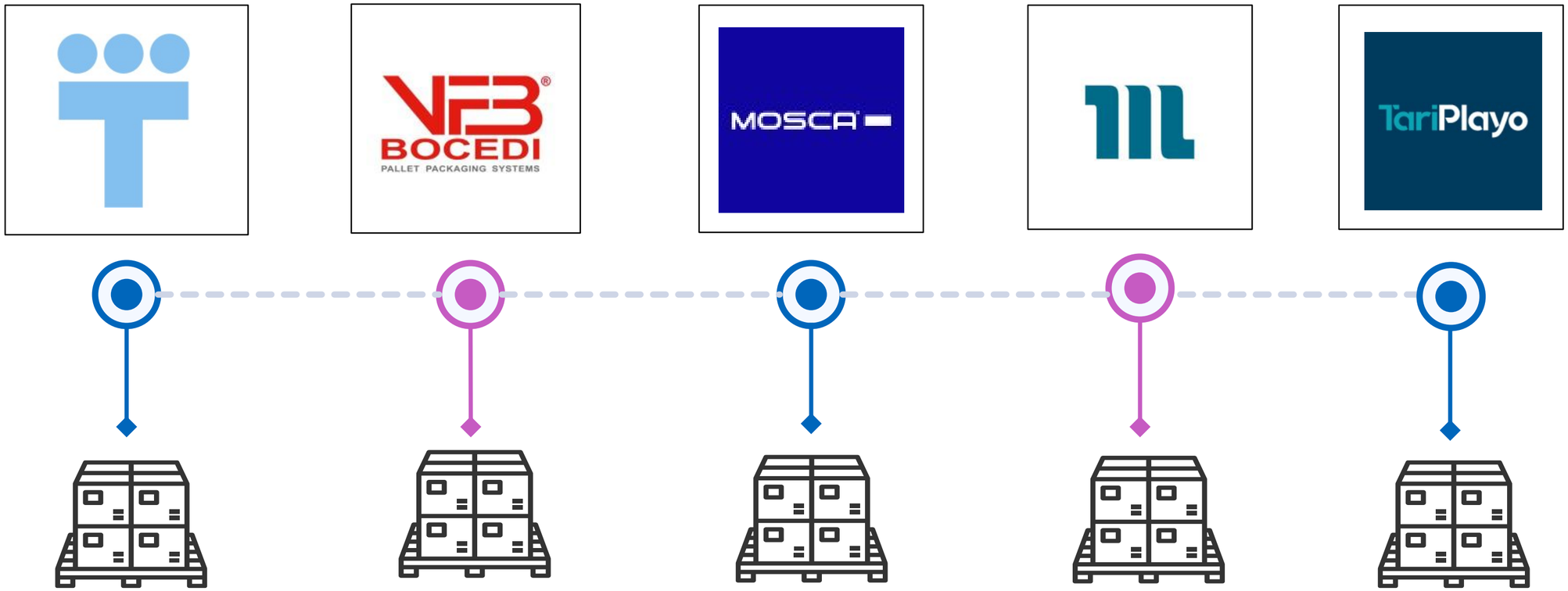
Industries:

Packaging: Pallets, film, straps



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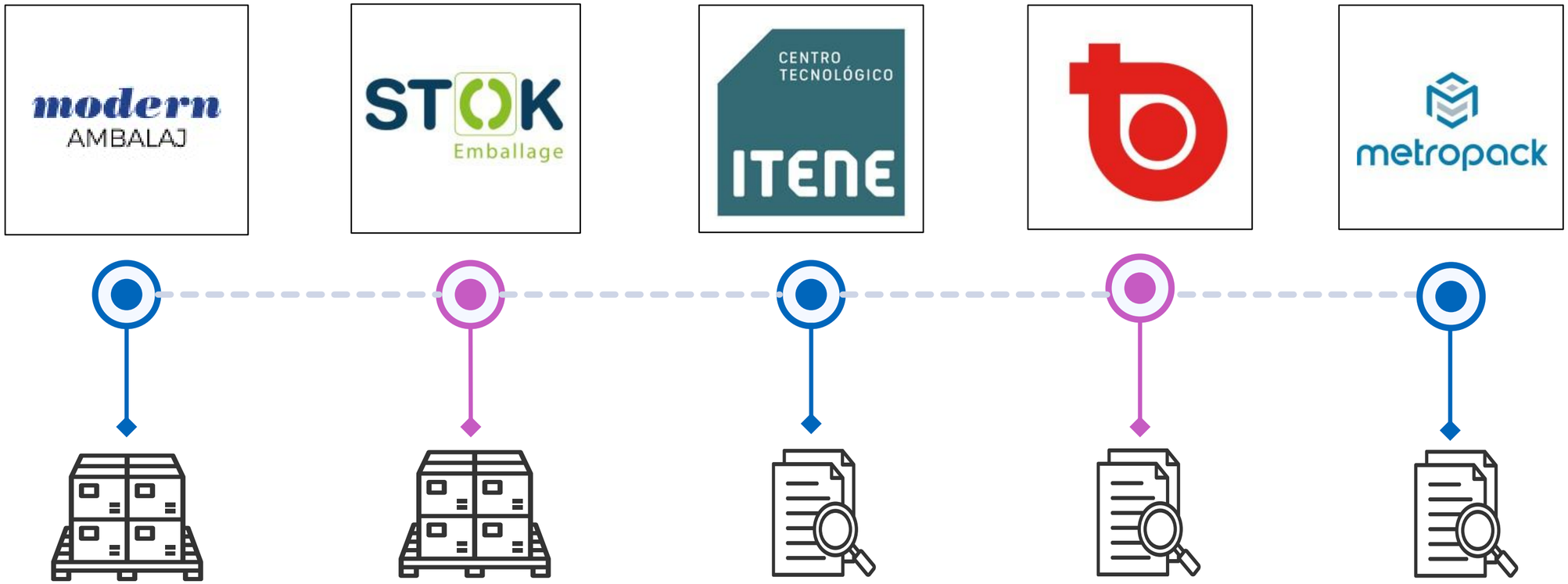
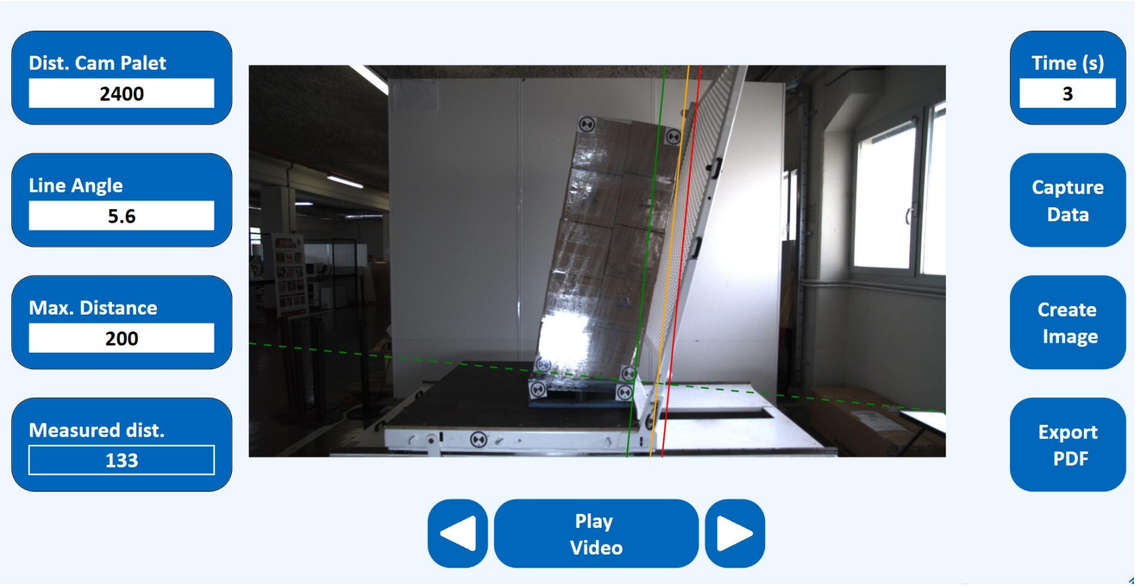
Industries:

Packaging, Universities & Research Institutes



Family

innVision ST



Semi-automatic software

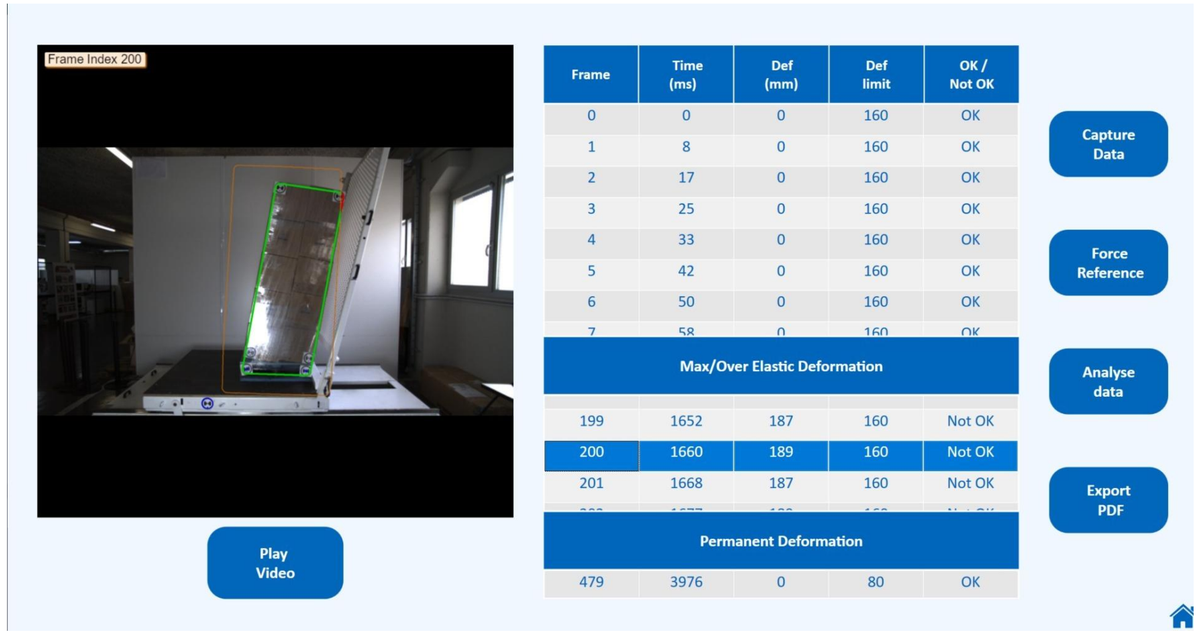
High-speed camera

Quick, easy analysis; Multiple applications

Create test report

Family

innVision PRO



Frame	Time (ms)	Def (mm)	Def limit	OK / Not OK
0	0	0	160	OK
1	8	0	160	OK
2	17	0	160	OK
3	25	0	160	OK
4	33	0	160	OK
5	42	0	160	OK
6	50	0	160	OK
7	58	0	160	OK
Max/Over Elastic Deformation				
199	1652	187	160	Not OK
200	1660	189	160	Not OK
201	1668	187	160	Not OK
Permanent Deformation				
479	3976	0	80	OK

Fully-automatic software

High-speed camera

Effortless analysis; Multiple applications

Automatic test report generation

Components

High-speed camera & lens

PC with software

(PRO only)

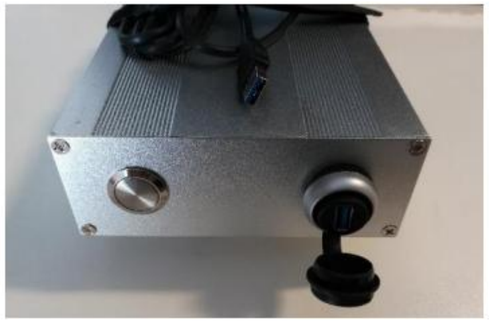
innVision

Auxiliary tripod

Tripod with leveling mounting adaptor

innVision PRO

For non-SLTT equipment



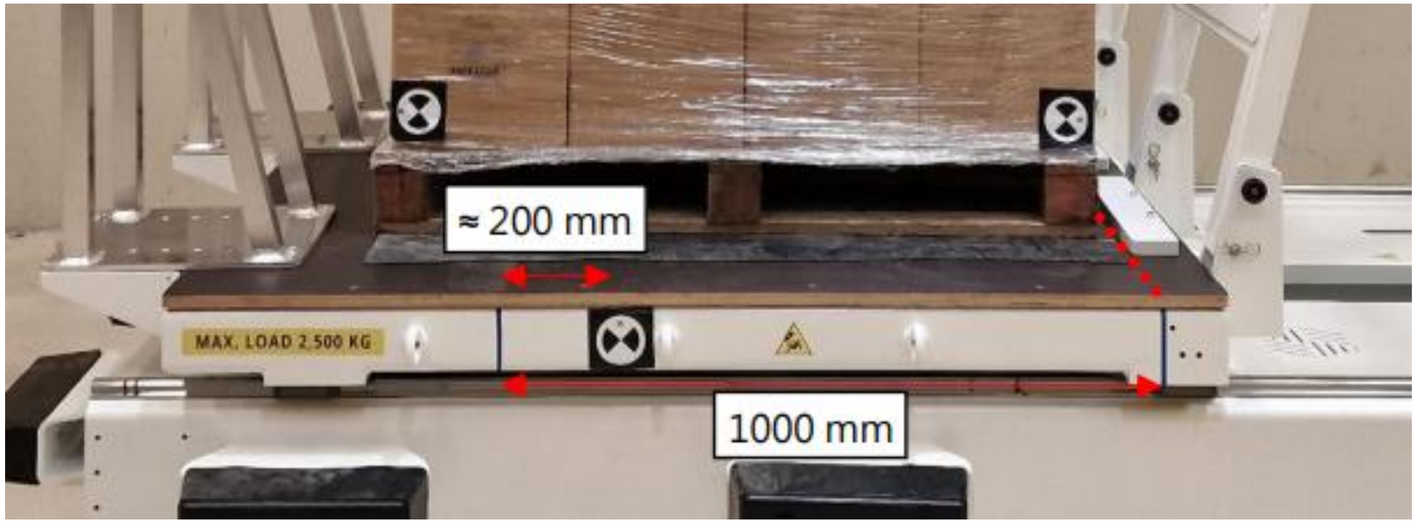
Trigger box

Magnetic base

Inductive proximity sensor

Sensor cable extension

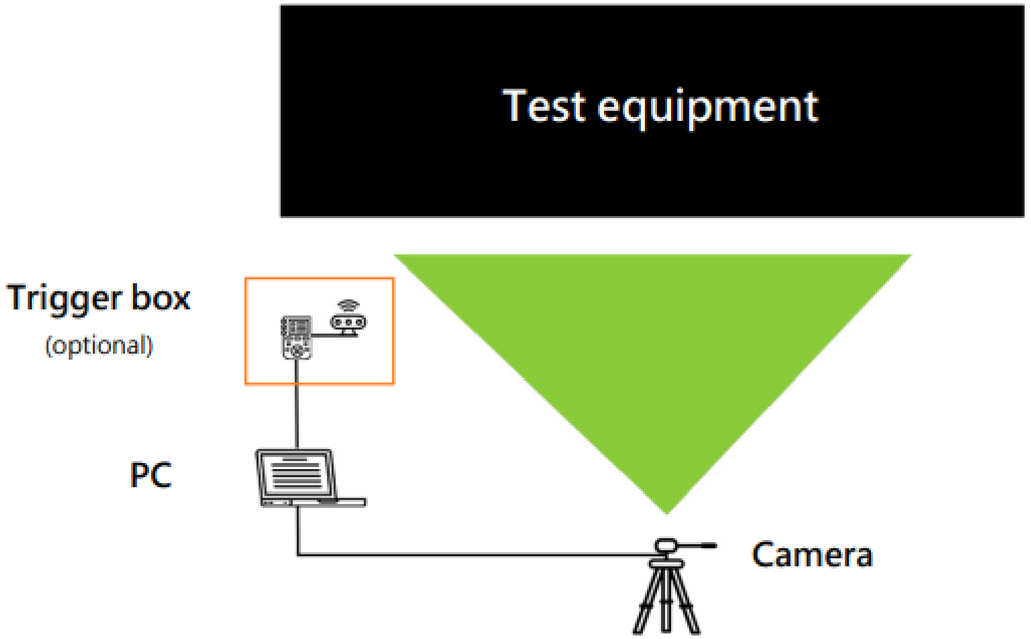
Setup

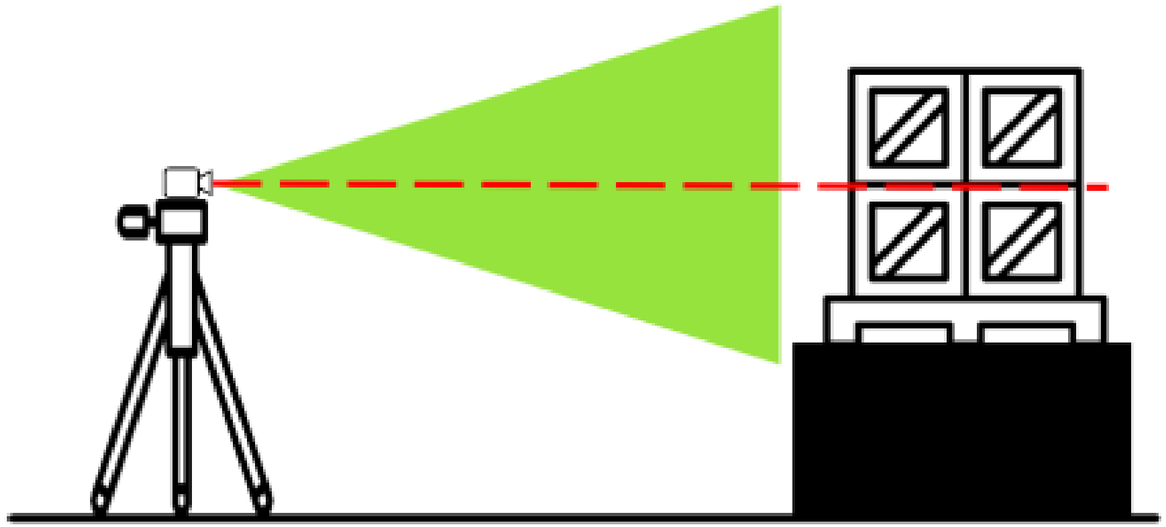


Reference target on equipment;
recommended distances.

Stability tests: 4 targets, 1 per corner
Tilt tests: 2 targets, pallet base corners

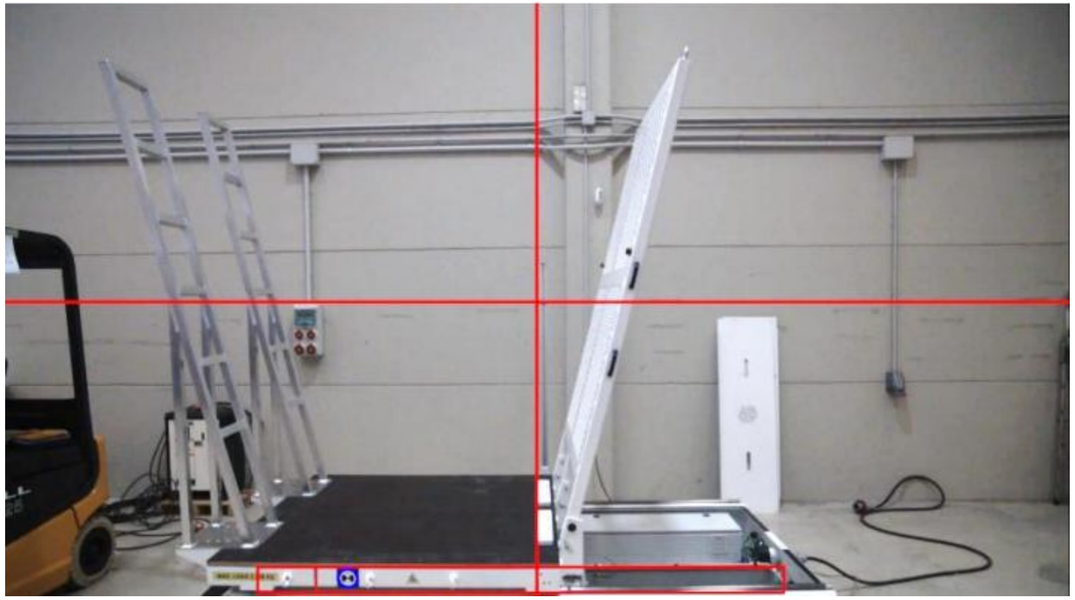
Setup





Setup

Lighting is important for correct operation.



Verify that targets are recognized by the system.

Adjust camera focus.

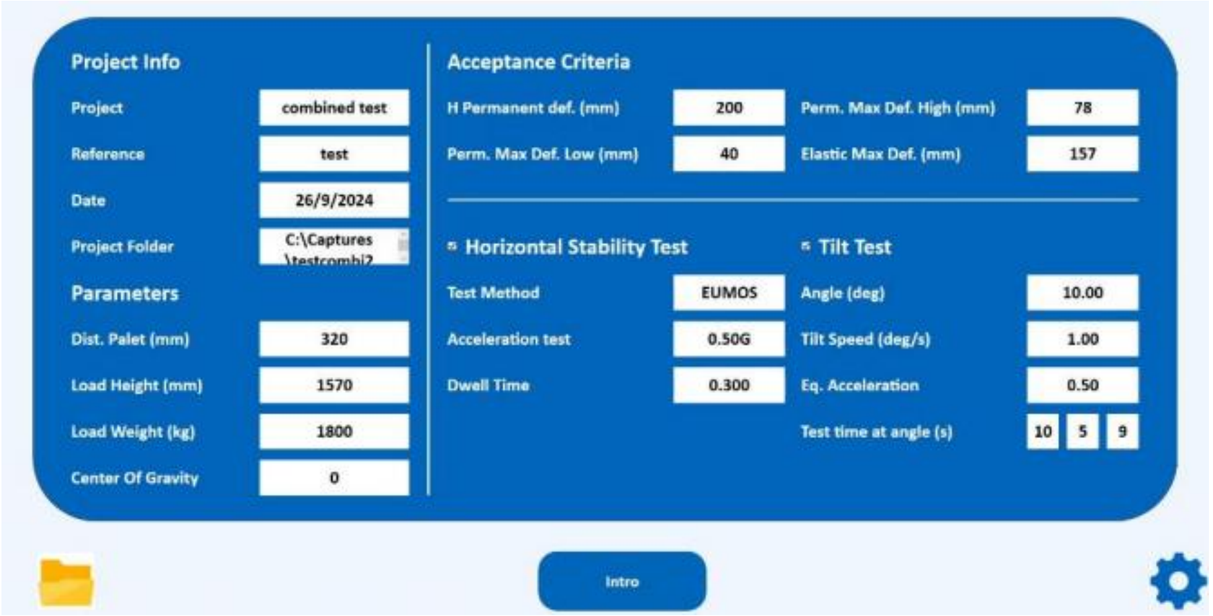
Green: Camera tilt angle; must remain horizontal

Blue: Pan angles

Red: Roll angles

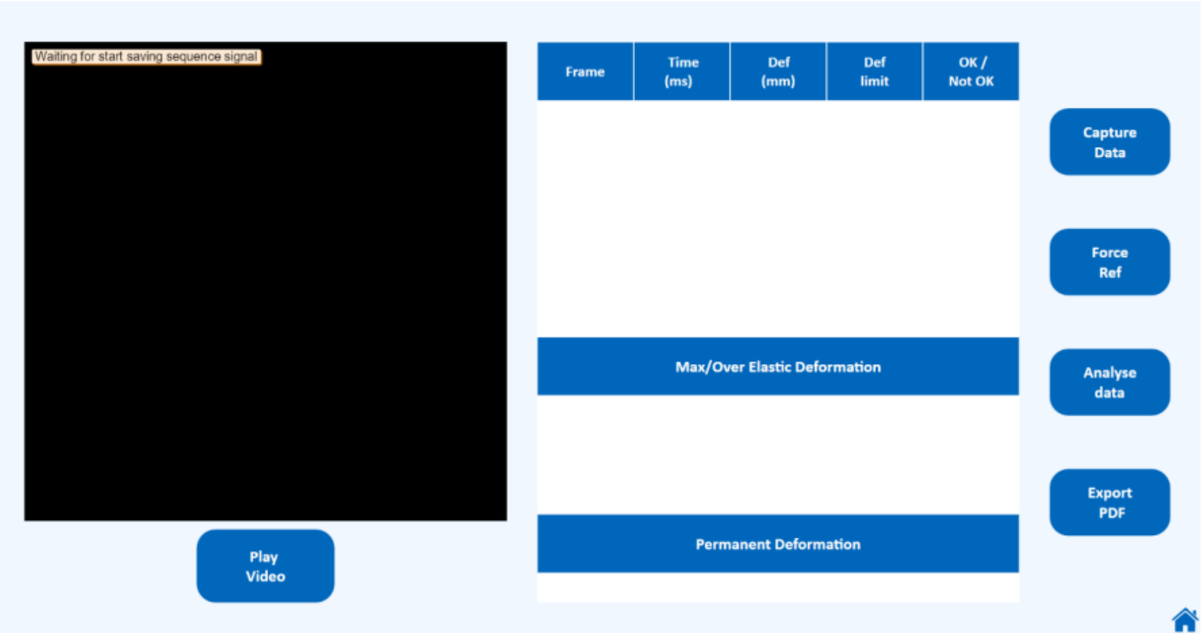
Recording

Fill in blanks to create a folder to record test data.



Recording

Run test. When finished, results appears indicating frame, time, deformation, and OK / Not OK report.



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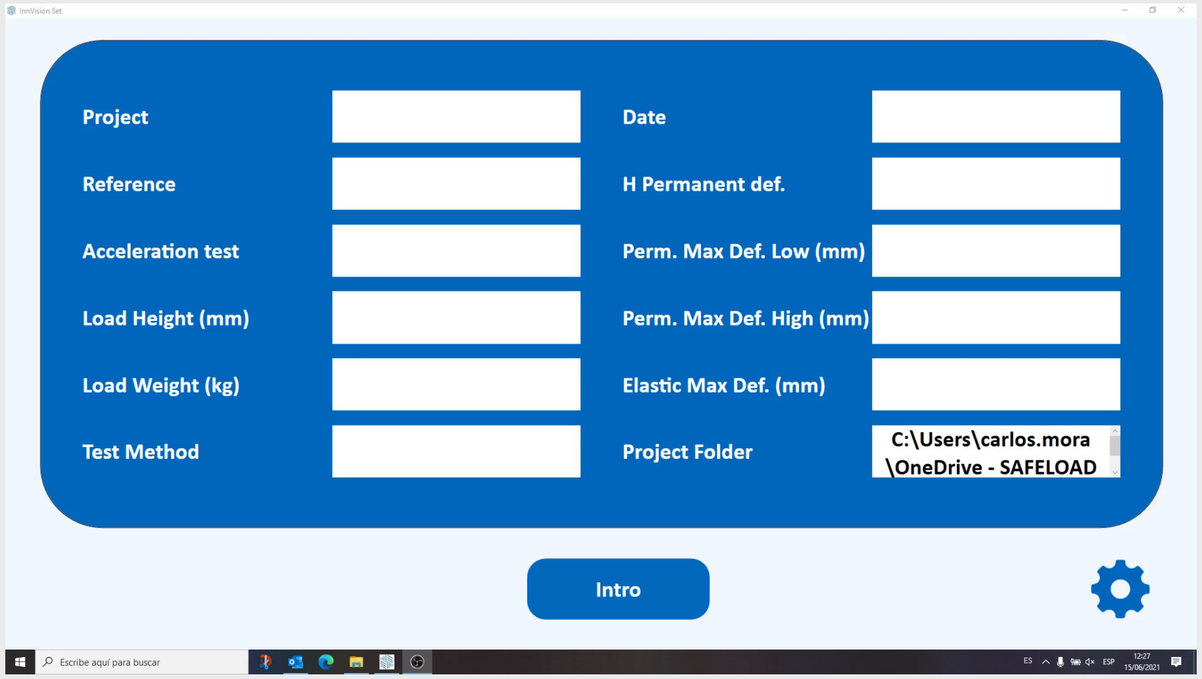
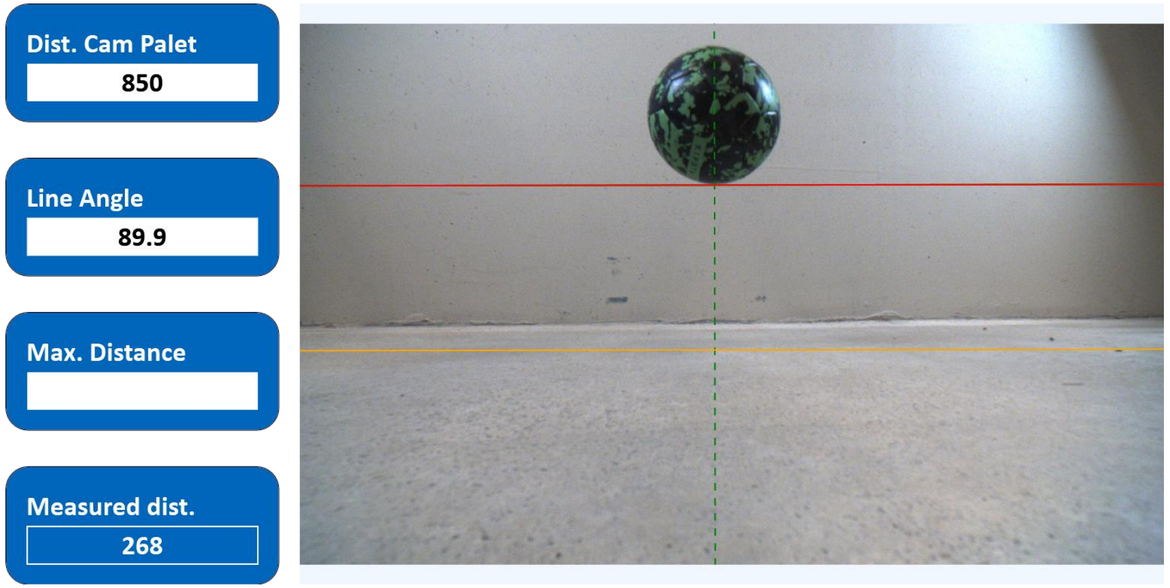
Recording: ST

Play video to select deformation points.

ST: Application Videos



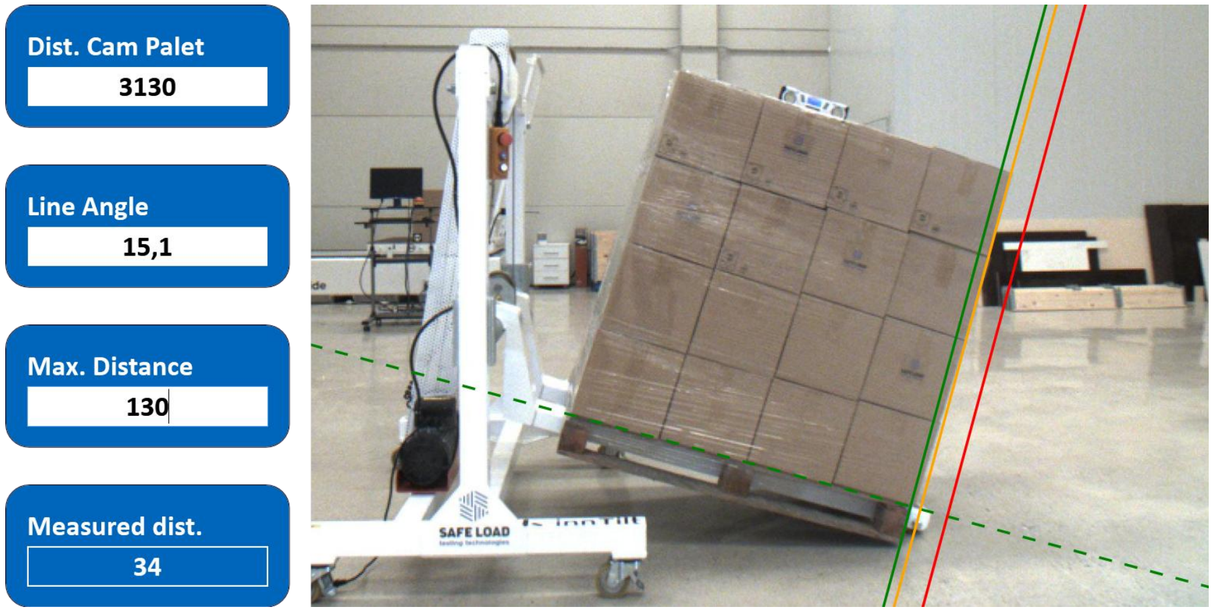
Drop testing



ST: Application Video

SAFE LOAD
testing technologies

Tilt testing



ST: Application Video

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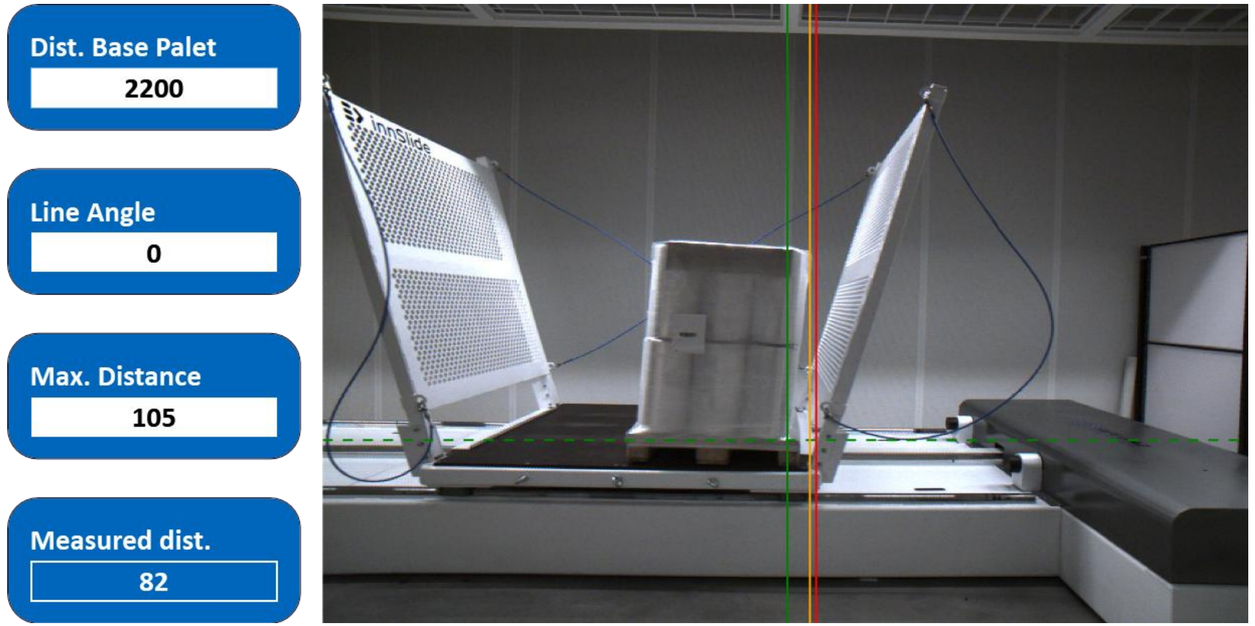
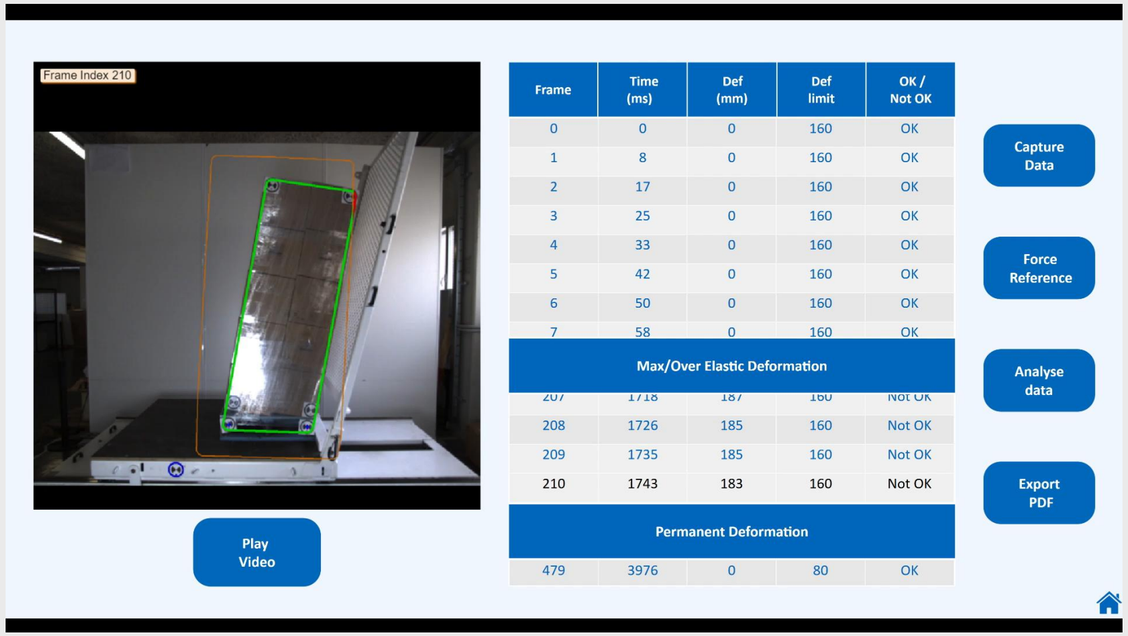
testing technologies

Load stability testing



SAFE LOAD testing technologies

PRO: Application Video



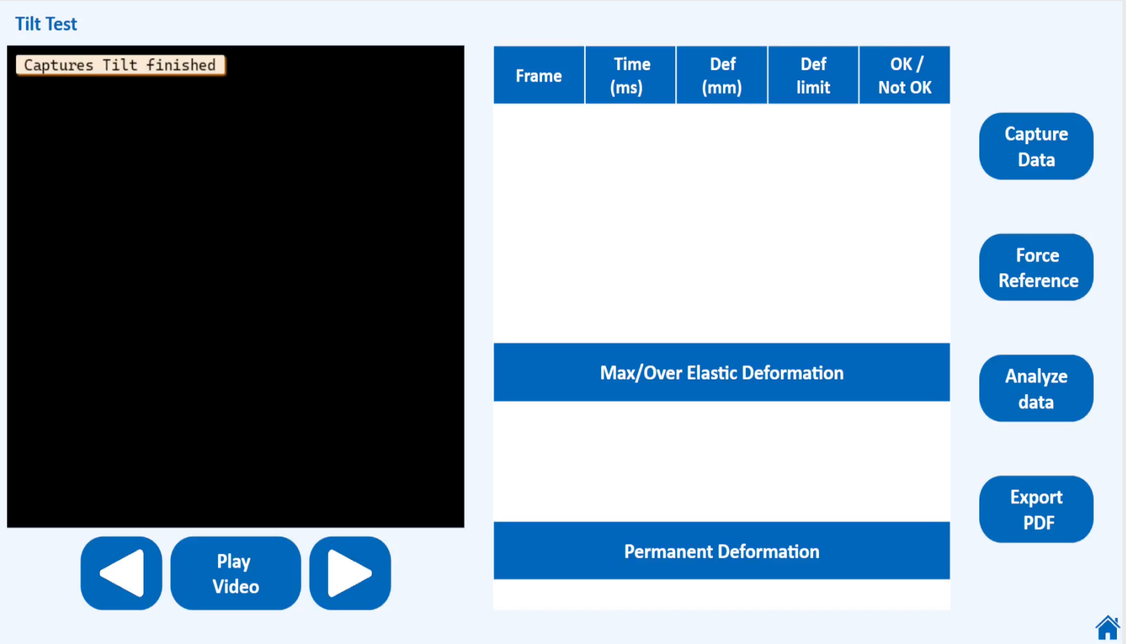
Frame	Time (ms)	Def (mm)	Def limit	OK / Not OK
0	0	0	160	OK
1	8	0	160	OK
2	17	0	160	OK
3	25	0	160	OK
4	33	0	160	OK
5	42	0	160	OK
6	50	0	160	OK
7	58	0	160	OK
Max/Over Elastic Deformation				
208	1726	185	160	Not OK
209	1735	185	160	Not OK
210	1743	183	160	Not OK
Permanent Deformation				
479	3976	0	80	OK

Load stability testing

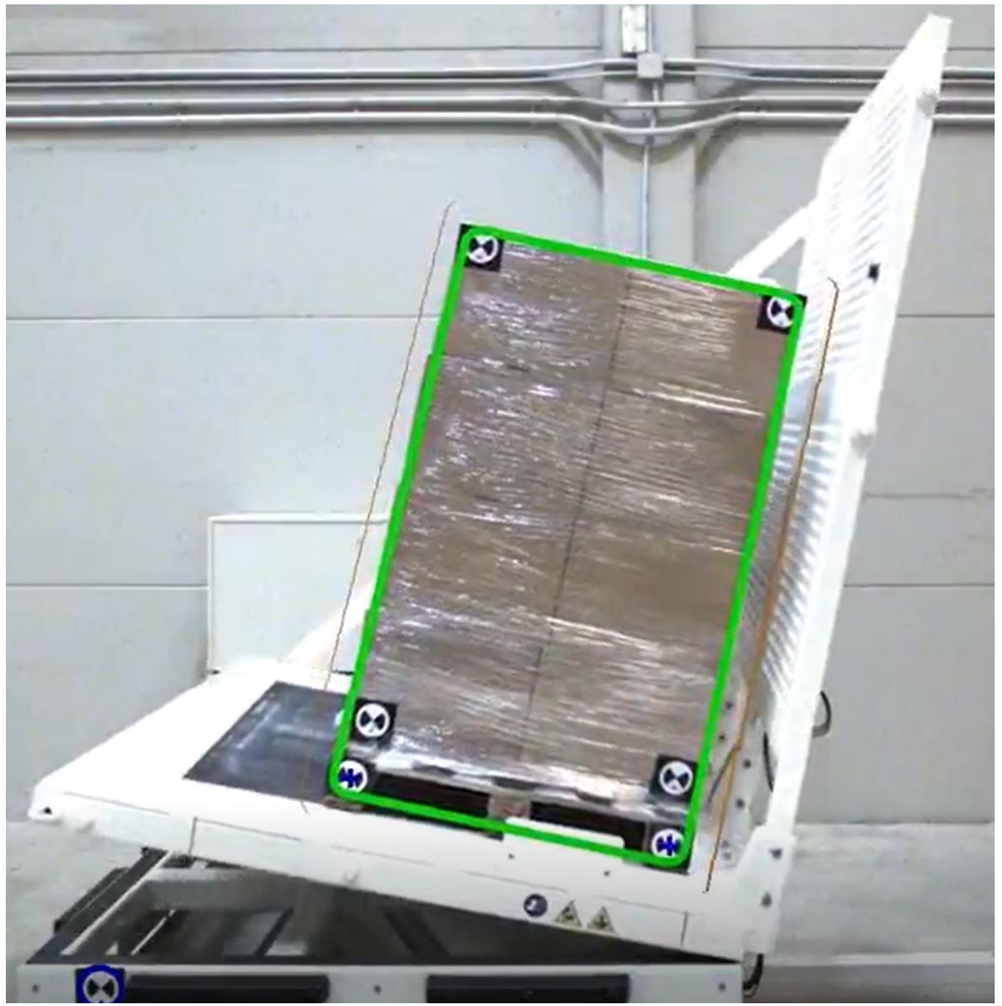
Frame	Time (ms)	Def (mm)	Def limit	OK / Not OK
171	1419	139	111	Not OK
172	1428	141	111	Not OK
173	1436	149	111	Not OK
174	1444	154	111	Not OK
175	1453	159	111	Not OK
Over Elastic Deformation				
167	1386	116	111	Not OK
168	1394	121	111	Not OK
169	1403	126	111	Not OK
Permanent Deformation				
479	3976	21	60	OK

SAFE LOAD testing technologies

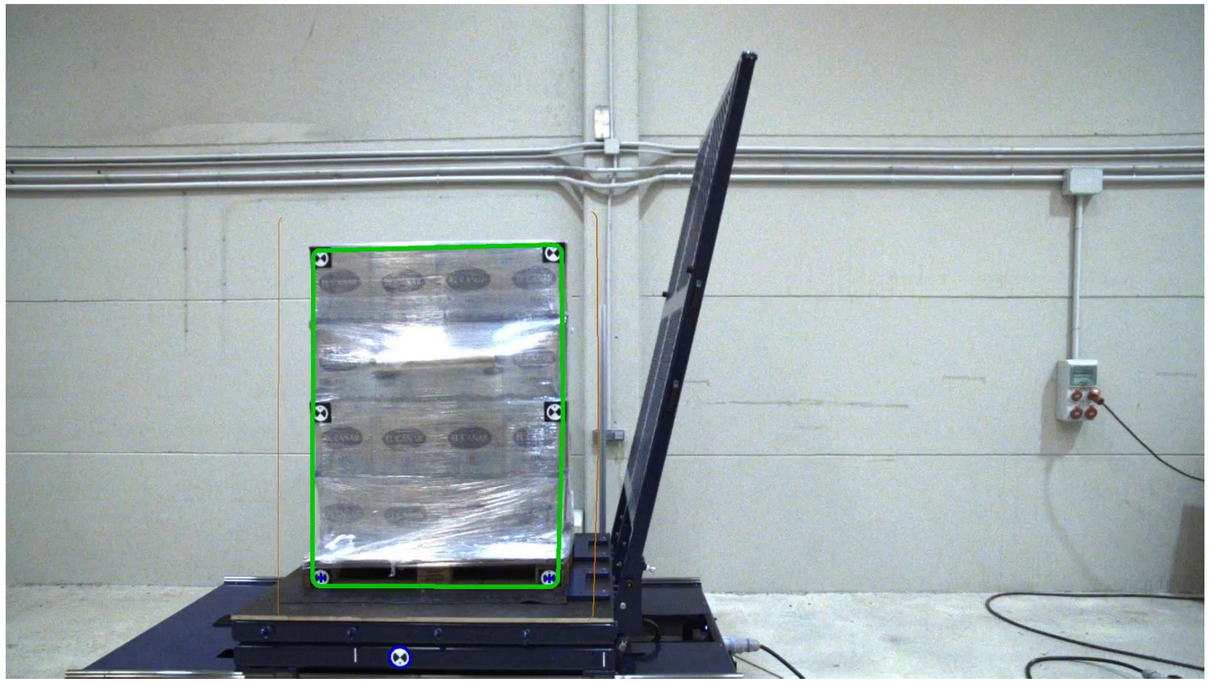
PRO: Application Video

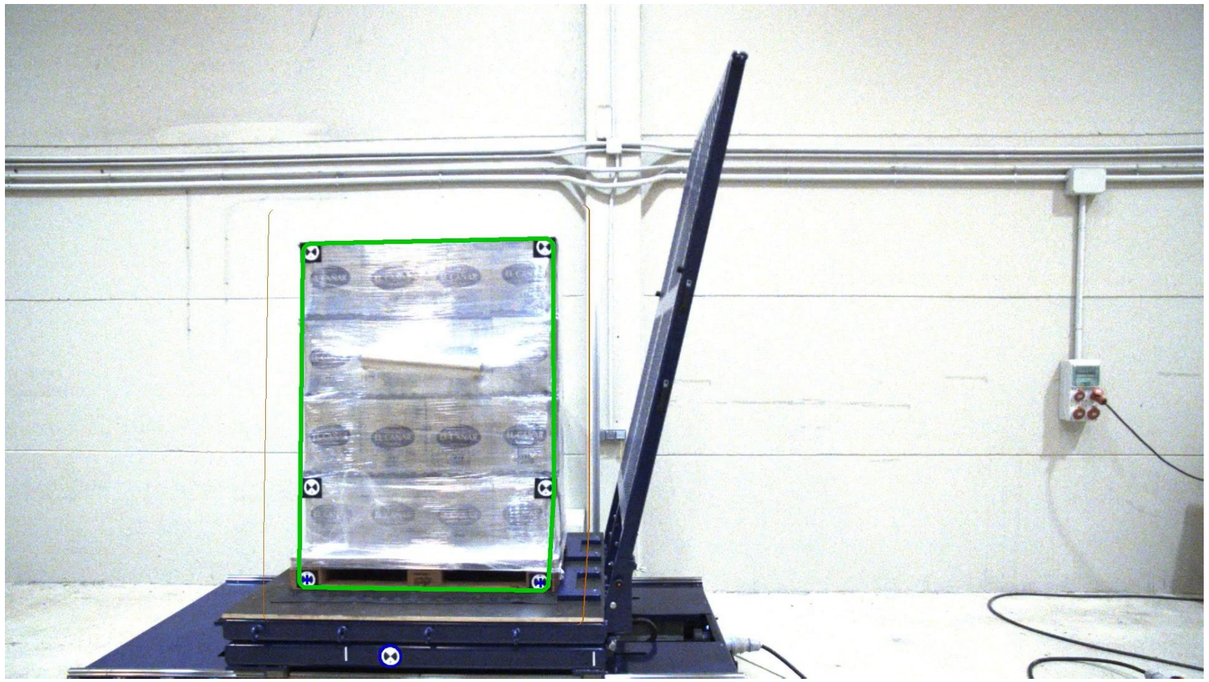


Tilt testing



PRO: Application Videos





innSlide Hybrid testing

PRO: Application Video

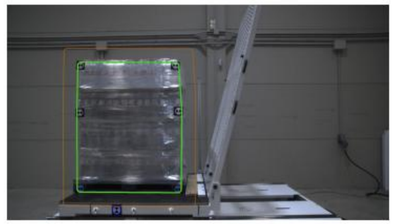
EUMOS Report Generator

B. TEST RELATED DATA

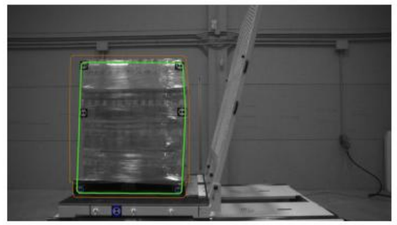
LENGHT DIRECTION TEST

	CONCEPT	DESCRIPTION
11.	**Date**	14/2/2024
12.	**Place**	SAFE LOAD (VLC-SP)
13.	**Rigidity**	0,40g

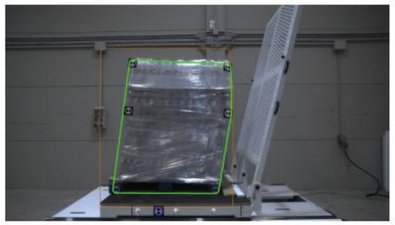
Before testing



Permanent deformation



Maximum Elastic Deformation



Recording modes

Automatic

Activated after launching test on the machine.
Only available for the innSlide stability tester family.

Manual

Activated in innVision software.
Press capture data button & system will record test.

Horizontal stability test

Horizontal Dynamic acceleration applied to unit load.
Analysis of the elastic deformation during test, permanent deformation after test.

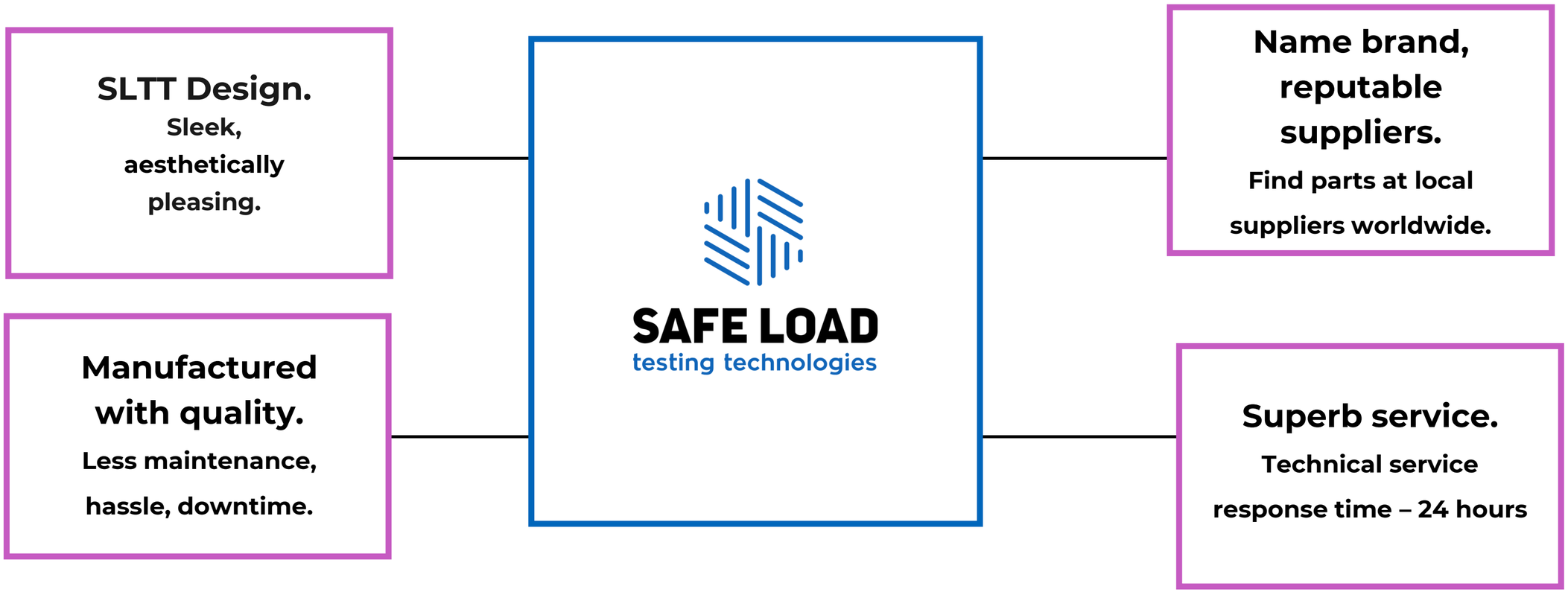
Tilt test

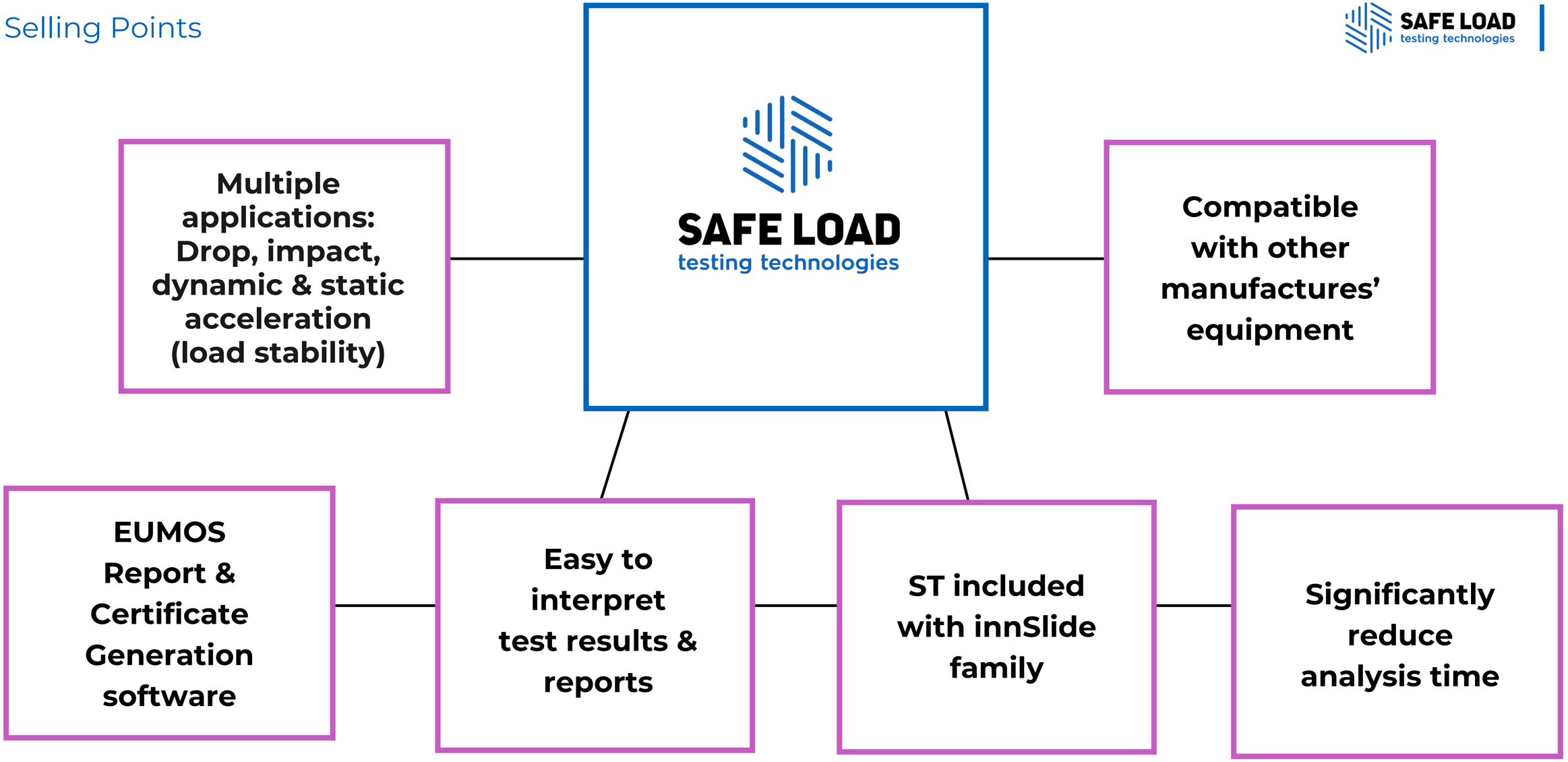
Static acceleration applied to unit load through inclination & holding at target angle during target time.
Analysis of permanent deformation after test.

Combination test

Horizontal dynamic acceleration followed by static acceleration test.
Analysis of elastic and permanent deformation.

The SLTT Advantage




SAFE LOAD
testing technologies
Multiple applications: Drop, impact, dynamic & static acceleration (load stability)
Compatible with other manufactures' equipment
EUMOS Report & Certificate Generation software
Easy to interpret test results & reports
ST included with innSlide family
Significantly reduce analysis time

SAFE LOAD
testing technologies

innVision
Users manual

Technical Manual

- Product description
- Setup
- Settings
- Operation
- Applications