THE NEW DESCALING JET TEST BENCH

**HYDRAULIC SPECIFICATIONS:**
- Installed pump Inoxihp type PF 300
- Max. working pressure : bar 300
- Max. working flow rate : lpm 210

**GEOMETRIC SPECIFICATIONS:**
- Spray height ( z ) : mm 50 ÷ 500
- Measuring area ( X X Y ) : mm 900 x 900
- Rack angle range : deg. 0 ÷ 40

**MEASURING SPECIFICATIONS**
- Impact sensor : Front diafragm type
- Impact pressure measuring range bar 0 ÷ 40 ( 0 ÷ 4 N / mm² ) actual : 20 average
- Impact pressure output step bar 0,2
- Accuracy : < 0,5 % of full scale
- Resolution : 0,1 → up
- Translation steps : > 0,1 mm ( x and y axes )

**STANDARD OUTPUT**
- Max. Impact pressure : bar
- Average Impact pressure : bar
- Full area three dimensional impact
- Three dimensional report

**OPTIONAL OUTPUTS**
- Maximum and average impact diagram
- Overlapping coverage for nozzles ( absolute ; percentage )
OPTIMIZE PITCH BETWEEN NOZZLES TO ACHIEVE BEST OVERLAPPING !!!!

By coupling test data at different pitches, you may get the optimal overlapping

$I = \text{pitch mm } 80 : \text{lack of overlapping}$

$I = \text{pitch mm } 45 : \text{excessive overlapping}$

$I = \text{pitch mm } 58 : \text{right overlapping}$
Define optimal time to replace wear nozzles by our “Wear and tear” service!!
The measurement of spray angles at different life times of a descaling nozzle:

- **NEW NOZZLE**: 34°
- **4 weeks**: 33°
- **8 weeks**: 31°
- **12 weeks**: 29°
- **16 weeks**: 27°
- **20 weeks**: 25°

*Real spray angle* vs *angle for optimal overlapping*
STANDARD OUTPUT

**Impact pressure along X axis**

![Graph showing impact pressure along X axis]

**Impact pressure along Y axis**

![Graph showing impact pressure along Y axis]

**IMPACT PRESSURES CHART LEGENDA:**

- Maximum pressure value found on the vertical axis intercept.
- The rms value is calculated considering the average value of the impact pressure values of the 8 neighbouring points to the specific measuring point, in order to disregard the possible effect of local fluid veins. The orange curve represents the maximum rms value so calculated.
- Average pressure value found at the intercept of the vertical axis; therefore, on the axis X (corresponding to the primary spray angle, there will be indicated the average of the values measured along the axis Y (corresponding to the secondary spray angle) in correspondence to that X value.
- Average rms value calculated of the pressure measured at the intercept of the vertical axis calculated as above.

**Three dimensional report**

![3D representation of pressure distribution]

**Top view of covered area**

![Top view diagram of the covered area]