

## 8. Laboratory Testing

The stringent specifications followed by Interplast in pipe production are certified in its laboratories with tests specified by European standards 12202 and 12318, German DIN 8077/78 and Spanish UNE 53380 and 5381. The laboratory distributes pipes that have been quality tested in the following ways:



### - Thermal cyclic tester

This comprises a system of repeated cyclical tests on hot (70-95° C) and cold water under pressure. Basically it resembles heating and plumbing circuits under real operating conditions. It is the first system of cyclic testing of representative circuits to operate in Greece and one of the few operating in Europe.



### - Raw material flow test.

This is a fixed test that is carried out each time raw materials are received. The flow of the raw materials is very important in defining the temperature profile of the Extruder and consequently the homogenisation of the material.

### - Measurement of cross-linking degree, for PEX pipes, on a daily basis.

The pipes produced are checked for their cross-linking percentage which should be at least 65%.



### - Checking of pipe linear expansion.

Specimens from each production lot are kept in the laboratory stove at specific temperatures and for a specific period of time. The results should not exceed DIN, UNE & EN standards.

### - Microscopic homogenisation check.

This is one of the most important checks and in conjunction with raw material flow it defines the temperature profile and turns of the Extruder. All the pipes display the best possible homogenisation proving their long service life.



**- Internal pressure check**, remaining for 1 hour at 20° C and 95° C and 22, 165 and 1000 hours at 95°C as specified by European standards, German DIN and Spanish UNE. The 1-hour tests are performed on each batch of finished product, the 22 and 165-hour tests are performed every 2 weeks and the 1000-hour test once per year for each dimension and type of pipe.



**- Impact test** in accordance with the requirements of DIN, UNE and EN standards which describe the test method.

**- Visual inspection of pipe surface, measurement of outer diameter and measurement of wall thickness by use of certified instruments.**

**- Checking of average weight, for sewage pipes**

**- Dichloromethane solution test, for sewage pipes.**

**- Watertightness testing of sewage pipes and fittings.**

**- Axial shrinkage test, for sewage pipes.**

**- Durometer check, for brass fittings.**

**- Metallographic test and strength test with special torque wrench for brass fittings.**