

> When and why?

- Ageing of the heating network
- Thermal output of the network
- Renovation priorities

> The results

- Locating the wasteful sections, leaks
- Communication to principal
- Tracing layout on cadastral base



> The means of investigation

- High definition thermal camera
- System for digital recording of infrared and visible videos
- GPS data acquisition from the flights and images recorded
- CAD software

> The inspections

- Monitoring the network by air or land vector
- Seeking the thermally degraded zones (lack of heat insulation, leaks...)
- Checking and seeking the layouts

> Analysis

- Taking the characteristics of the sections (depth, diameter, zones crossed, valve chamber ...)
- By means of technical discussions in-house and with the network operator
- Transfer of the diagnosis onto the network drawing and locating the degraded zones

> Results

- Digital film with infrared and visible, geo-referenced images
- Thermal mapping of the network (computer file + drawings)
- Dossier: Comments and images of the degraded zones

DYNÆ

- > Vibratory analysis
- > Electrical analysis
- > Infrared thermography
- > Instrumentation and sensors
- > Software
- > Training



Head Office

Parc technologique Nord
 29 rue Condorcet
 38090 VILLEFONTAINE - France
 Tel. : +33 (0)4 74 99 07 10
 E-mail : contact@dyna.com

Branches:

Centre-IDF-Nord, Est, Sud-Ouest, Sud-Est,
 Ouest, Rhône-Alpes

> The efficiency of a network depends on two important factors

- The efficiency of the combustion: efficiency of the boiler
- The level of the losses coming from the heat exchanges and the leaks on the circuit



> Improvements to the network after thermography

- Repairing steam leaks
- Refurbishing the thermally degraded zones and heat insulation of the non-insulated parts



> Standard performance of the airborne campaigns

- Layout drawings provided by the Customer
- Requests for over-flight permission made by Dynae
- Scheduling the flights in winter conditions
- Survey of the network and recording of thermogrammes
- Transcription and analysis of the recordings
- Preparing the report
- Submitting the results and assistance with interpretation

