

### ▲ Who should attend?

Each person taking up new positions in the manufacturing, marketing, utilization and technical assistance of bitumen and other bituminous binders, as well as persons involved in road repairs, new roads and industrial bitumen uses.

### ▲ Duration

3 days

### ▲ Dates & Location

March 11 to 13, 2008  
Rueil-Malmaison (Paris)

### ▲ Tuition Fees

€ 1,450

### ▲ Course Coordinator

Sylvie Saulnier

Ref. **EG / BIT**

# BITUMEN MANUFACTURING, MARKETING AND TECHNOLOGY

## OBJECTIVES

As a result of the course, participants will obtain a better understanding of the bitumen binders industry, for roads, highways, airports, roofing, with a special attention for two products having a world-wide development, namely polymer modified bitumen and bitumen emulsions.

Objectives of this seminar are to present European and international commercial aspects of bitumen, polymer modified bitumen, bitumen emulsions, then to improve the technical knowledge of participants about these most important bitumen binders (manufacturing/properties/uses/quality control/safety/environmental issues).

Participants will improve their knowledge about the evolution road techniques in especially the road maintenance domain where low cost techniques using new equipment and new bitumen binders are adopted by more and more countries.

## COURSE CONTENT

### BITUMEN MARKETING

1 day

#### Commercial aspects of paving bitumen, polymer modified bitumen, bitumen emulsions

Market characteristics, consumption of various products, trend in demand.

Different types of customers, their wishes, impact of the technology developments on the business.

#### Commercial aspects of industrial (roofing) bitumen

As for paving bitumen.

#### Major European, American, African and Asia markets

Characteristics of major markets in these regions.

#### International bitumen business

International bitumen trading, production and consumption areas, distribution, imports/exports by trucks and by boats, in bulk, or in containers, or in drums.

### BITUMEN BINDER TECHNOLOGY

2 days

#### Properties and main uses of bitumen, polymer modified bitumen, bitumen emulsions

What physical properties make a good paving or industrial bitumen? Crude oil source and manufacturing process effect on those properties.

Description of road techniques and their evolution.

#### Manufacturing, tests, specifications, quality control

Different manufacturing processes, conventional testing, new rheology testing and road performance prediction.

Recent specifications in Europe, USA, and other countries.

#### Road surfaces with hot mixes and cold mixes

Different types of mixes, aggregate gradation, mixes manufacturing, laying, quality control, performance testing, road life behavior.

#### Polymer modified paving bitumen and other modified bitumen

Their major interests, their technology, main additives, manufacturing, processes uses.

Properties evaluation, effect on road performance.

Specifications and quality control.

#### Road repairs and road maintenance techniques

Different techniques which are used today over the world, low cost and high performance solutions, new binders, new laying equipment.

#### Bitumen emulsions and polymer modified bitumen emulsions

Their development world-wide, different road techniques using emulsions: chipseals, slurryseals, tack-coats, cold mixes.

Properties of emulsions, manufacturing, laying.

Specifications, quality control.

#### Roofing waterproofing techniques

Technology of waterproofing techniques for roofs.

#### Bitumen, polymer modified bitumen, oxidized bitumen, for waterproofing techniques

Manufacturing, uses, quality control, performance on roofs.

#### Health, safety, environment

During transportation, storage, application of bitumen binders.

European and international rules.