

Some French Maintenance Safety Data (2007)

(according to AFIM's studies)



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Overall average data:

**Fatality occurrence:: In 2006 = 6 times the national average
(1.85 for 10 000 workers)
In 2007 = 3 times the national average
(0.94 for 10 000 workers)**

**Serious occupational accidents occurrence: 3 times the national average
Occupational accidents frequency rate: 50 to 60% above national average
Occupational disease occurrence: 6 times the national average
Days lost for temporary unavailability: 2 times the national average
(average of 57,4 days of unavailability per accident)**

Direct cost of occupational accident & diseases: 5% of the total amount of wages

Detailed data (2003) (as per AFIM's sample surveys)

Occupational Accident Frequency Rate (from 1 day unavailability/million working hours):

National average = 27

Industrial maintenance = 44

Building maintenance = 35

of which, in Industrial Maintenance:

Fitters = 152 Boilermakers = 92 Pipe-fitters = 72 Welders = 45

Mechanics = 10 Electricians = 8 I&C specialists = 1.3

Splitting of accidents by causes:

Industrial maintenance

Handling = 30%

Process energy (electricity, heat, pressure, moving machinery, etc) = 24%

Process equipment = 14%

Tools = 13%

Vehicles = 11%

Safety devices failures = 8%

- **Building maintenance**

Equipment = 25%

Staircases = 15%

Environment = 14%

Step-ladders = 11%

Energy (electricity, heat) = 10%

Tools = 6%

Traffic = 5%

Vehicles = 1%

Misc. = 13%

. Industrial maintenance

Frequency rates: permanent vs interim/contracted workers

Permanent fitters = 133	Interim/contracted fitters = 424 (3 times more)
Permanent boilermakers = 24 1602	Interim/contracted b.makers = (67 times more)
Permanent pipe-fitters = 70	Interim/contracted pipe-fitters = 89 (1.3 time more)
Permanent mechanics = 10	Interim/contracted mechanics = 6 (0.6 time more)
Permanent electricians = 7	Interim/contracted electricians = 21 (3 times more)

. Building maintenance : *Frequency rates*

Plain workers = 106 Technicians & supervisors = 20

***Permanent occupational diseases occurrence:
(compared to the national average):***

**Asbestos: Industrial maintenance = 6 times
Building maintenance = 14 times**

**Deafness: Industrial maintenance = 25 times
Building maintenance = 6 times**

Benzene: Industrial maintenance = 70 times

2007 data

Frequency index (accidents over 3 days / 1000 workers)

National average = 39.4 Maintenance = 55.4

Days of unavailability / worker/year

National average = 1.96 Maintenance = 3.82
(2 times more)

SOME WAYS TO IMPROVE THE SAFETY OF CONTRACTORS' WORKERS

I - GIE - Regional Groups of Economic Interest (joint safety expertise of enterprises and their contractors in a given area)

Example: GIE "Qualité-Entreprise" in French South-West area (29 large enterprises and 520 contractors)

II – Safety certification systems for contractors

Examples: MASE in France, VCA/LSC in Netherlands and Belgium

III – Mandatory Safety Passport for the access of a worker to a working site

Example: WEG/DGMK Safety Passport in Germany



IV – Specific requirements, such as:

Contractors made fully aware of the risks of a working site

Contractors' workers considered as enterprise workers from the safety side (e.g. training, safety statistics, safety meetings)

Enterprise coordinator for the contractors

Sub-contracting to be agreed by the enterprise (to avoid the uncontrollable cascade of subcontractors, sub-subcontractors, etc,.....)

Zero accident bonus

etc...

*Some Bibliography on the health effects of
outsourcing/temporary employment/
precarious work*

See the publications of:

**Michael QUINLAN - Claire MAYHEW - Philip BOHLE - of University of New
South Wales (Australia)**

**Annie THEBAUD-MONY, Research Director at INSERM (France)
(in French and English)**

**Mirka KIVIMAÄKI, University of Helsinki (Finland) and Marianna
VIRTANEN of FIOH (Finland)**

Fernando BENAVIDES, Pompeu Fabra University (Spain)

THANK YOU



Conférence « Maintenance – do it safely » (Nov 25, 2010) – Workshop 1 –
« Subcontracting maintenance : an increased risk factor

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