

EGAS C Report – Statistics 1995 - 2010

on European Gas Safety Part C: Gas Installations

- Introduction
- Data Base and Definitions
- Analysis and Results
- Conclusions

Edited by: [Marcogaz](#)
Av. Palmerston 4
B - 1000 Brussels

Introduction

Utilisation of large quantities of natural gas in Industry as well as in commercial, domestic and traffic applications is ranked as very safe among industry experts.

Nevertheless the public awareness and the media are more focused on spectacular accidents than on safety records or statistical values. But rational discussion about safety and risk in the gas installations is only possible if it is based on unbiased facts and figures.

Furthermore the gas industry itself wants to show its safety record and wants to identify its own weak points to be able to allow for risk-oriented and economical improvements.

Therefore, in 1995 nine major gas companies and national industry associations began to gather data on gas-related accidents in their Countries. Collection of data, exchange of views and development of improving measures was formalised by setting up the ETPS (European Third Party Safety) group.

In 2005 this ETPS group joined MARCOGAZ to allow for a broader data base in new European Countries and above all to allow for a better communication of the safety performance of the European Natural Gas Industry.

In 2008 MARCOGAZ, taking into account the unbundling of Companies, decided to split ETPS into two specific groups, ensuring thus a more accurate and reliable data collection:

- "Gas Distribution" under the designation EGAS B,
- "Gas Installations" under the designation EGAS C,

This report gives an overview on the EGAS C data base and on the main analyses and results in a statistical way, shown in tables and different graphs. Some conclusions at the end aim at easier understanding of the statistical findings. The indicated parameters represent a set of safety performance indicators used in the European Natural Gas Industry.

Statistics in this report concern only domestic, residential, commercial and tertiary installations.

EGAS C - Data Base and Definitions

Period: 1995 - 2010

Participating Countries for 2010: 10

YEAR 2010: representing a total number of approximately 68 million connected customers of and a total length of gas distribution mains of around 1.111.000 km

Participating countries in the MARCOGAZ EGAS C group for 2010:

- Belgium
- Denmark
- Finland
- France
- Germany
- Italy
- Netherlands
- Portugal
- Spain
- Switzerland

Table C1 EGAS C general information

Note: the year 2003 is to be disregarded since the data collection had not been completed

Gas installations: Gas pipeworks (pipes and fittings) and gas appliances (including flue systems) situated after the point of delivery. Such installations are normally under the responsibility of the customer

Accident - An unintentional event, related to natural gas, which has caused physical injuries or fatalities or big material damage.

Injury - Injury, as a consequence of a natural gas accident that needs a hospitalization of at least one night.

Fatality – Death, as a consequence of a natural gas accident immediately or within 30 days of the event.

Table C2 Definitions for the EGAS C data base

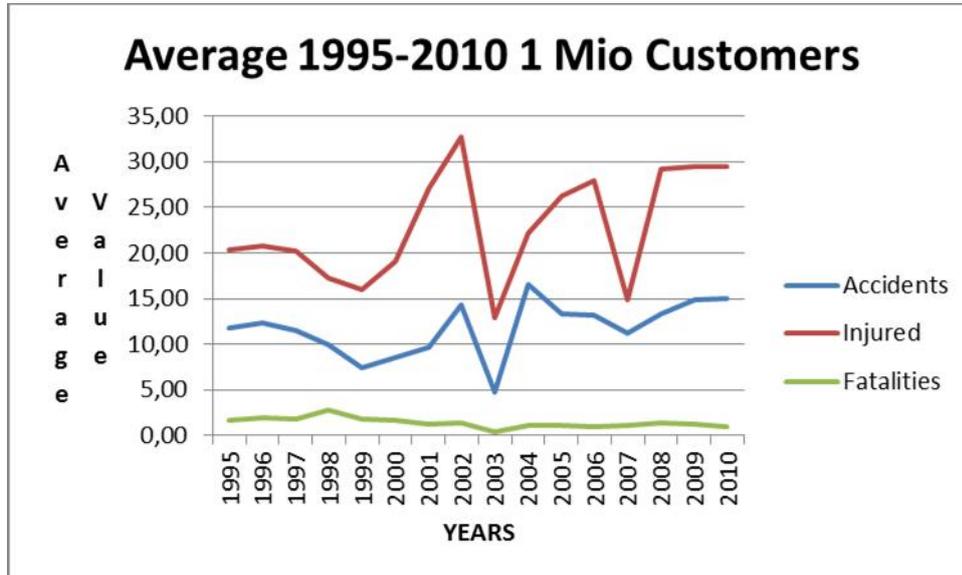


Fig. C1 illustrates the ratio of accidents/injuries/fatalities to 1 million customers for each year from 1995 to 2010 – **AVERAGE FATALITIES: 1,39 per 1 million Customers**

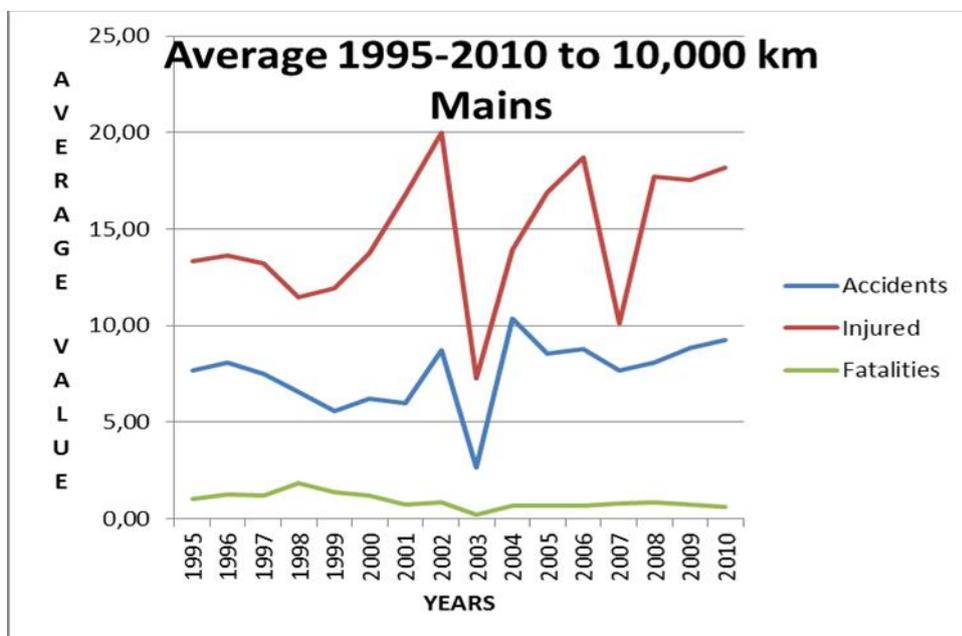


Fig. C2 illustrates the ratio of accidents/injuries/fatalities to 10,000 km length of gas distribution mains for each year from 1995 to 2010 – **AVERAGE FATALITIES: 0,91 per 10,000 km of mains**

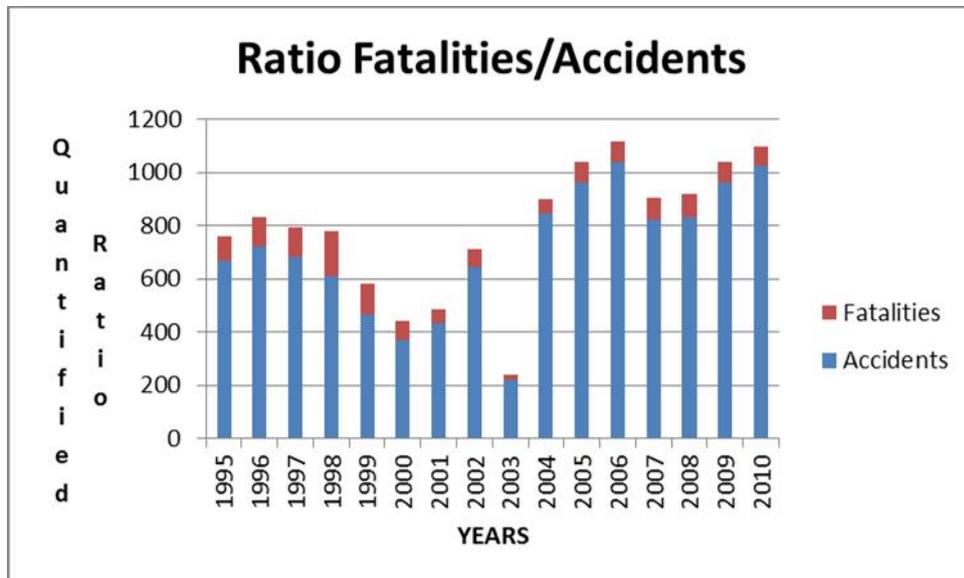


Fig. C.3 illustrates the proportion of fatalities to the number of accidents from 1995 to 2010.

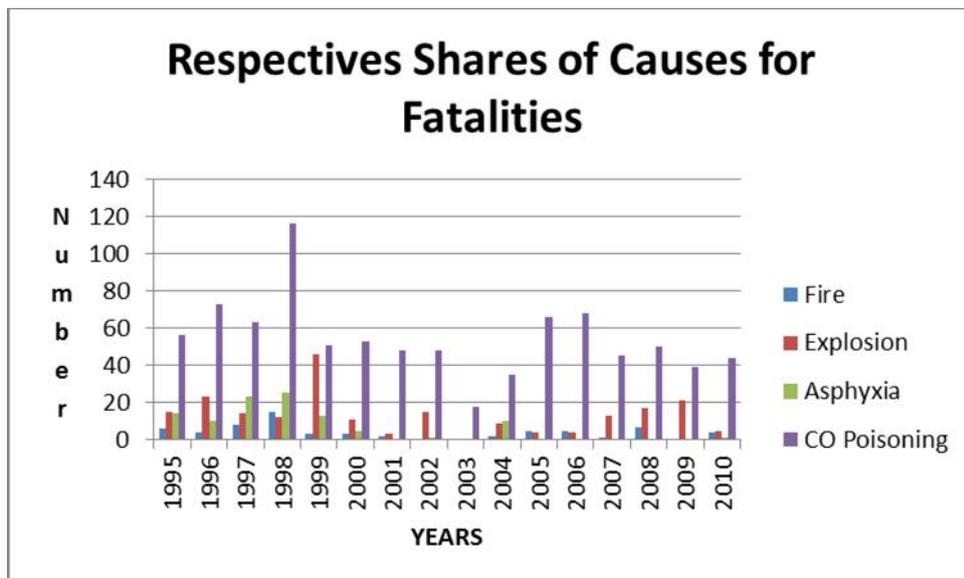


Fig. C4 illustrates the main causes of fatalities according to their respective shares from 1995 to 2010.

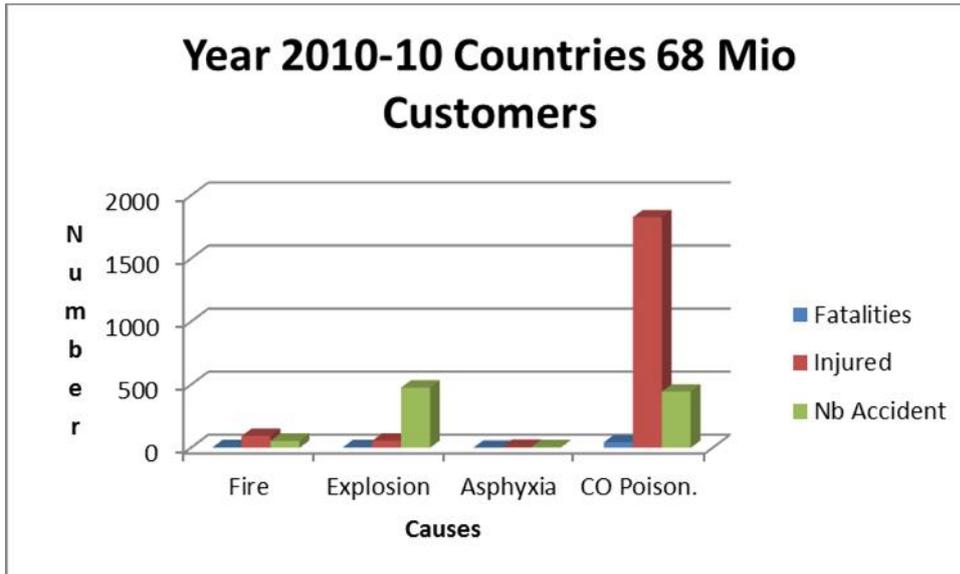


Fig. C5 illustrates the statistics 2010 in the aggregate for the 10 contributing Countries representing a total number of 68 million customers and a total length of gas distribution mains of 1.111.000 km.

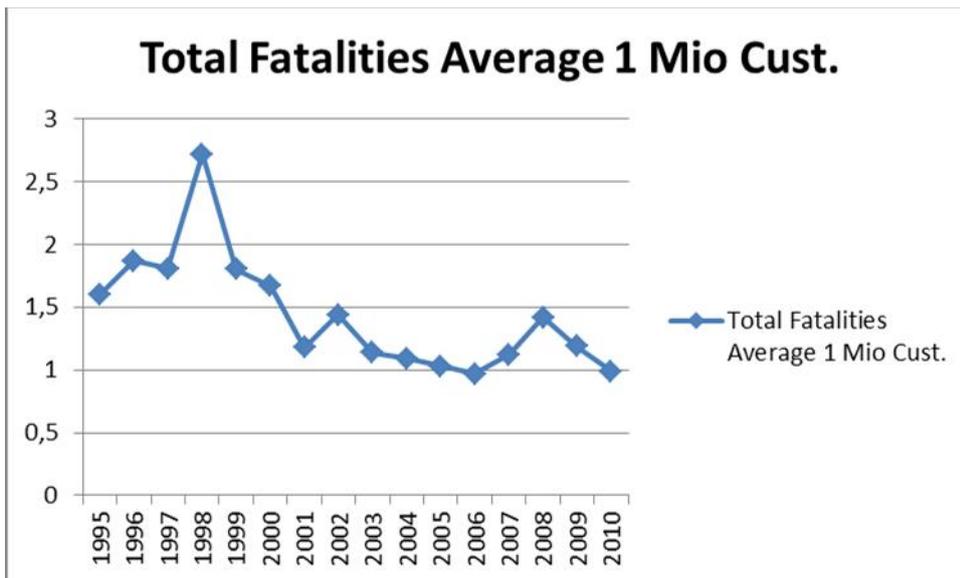


Fig. C6 illustrates the evolution of fatalities over the years (ratio to nb of customers)

To note, as a supplementary information for 2010, 14 fatalities (20% of the total) due to intentionally caused accidents (suicide, manipulation)

Conclusions

- a) The EGAS C data base proves clearly its statistical representativeness in the field of the European Natural Gas Installations, based on ten Countries for 2010, representing appr. 68 million gas customers, and recorded since 1995;
- b) The number of fatalities on the gas installations is very low with an average frequency of 1.39 per 1 Mio gas customers (see fig. C1) and 0.91 per 10,000 km of length of gas distribution mains (see fig. C2) for the years 1995 – 2010; a decrease is to note since 2008 (see fig. C6); equally each accident causes few fatalities in comparison to the number of accidents (see Fig C3);
- c) Regarding the causes (see Fig. C4), divided into FIRE, EXPLOSION, ASPHYXIA, and CO POISONING, the latter remains the weakest point for which improvements are needed; consequently, any gas safety policy shall strongly consider this issue.
- d) The relative high cases of fatalities which are accounted by intentional acts (20%) has also to be considered.
- e) Although the European Gas Industry can display excellent Safety Performance Indicators in the field of gas installations, it will keep up maintaining and improving technical measures towards a safety level as high as possible.

NOTE

The information and data included in this document have been compiled by MARCOGAZ from a variety of sources from its Members. MARCOGAZ will not accept any liability for the data accuracy and completeness.