

ICEBERG: EN 81-80 (*)

By Sefa Targit

Very important persons from the worldwide lift industry have come together in and made valuable contributions to the Asansor Istanbul Exhibition organized in April this year.

In this strange age of terrorist acts which may be faced and confronted at any time and in any place no-one knows, we have to hold in high esteem such respectful persons who unhesitatingly travel to various different countries of the world and spend time and disseminate information and knowledge so as to assure a better vertical transportation of man under safer conditions as if counteracting against terrorism. The most explicit indicator of such holding in high esteem is to listen them carefully, to walk around the horizons of thought opened by them, and to try to contribute to development of the lift industry.

With this approach in mind, and departing from presentations of Mr. Luc Rivet and Ms. Ebru Gemici, the valuable members of ELA, let's now have a deeper look into the old lifts in socio-economic terms.

According to the information given by Ms Ebru Gemici, there are a total of 3,890,200 units of lifts still operating in 17 countries in Europe. And the distribution of these lifts to countries is as follows:

Country	Existing Lift
Italy	773.000
Spain	650.000
Germany	620.000
France	470.000
Greece	300.000
United Kingdom	245.000
Switzerland	158.400
Turkey	140.000
Sweden	107.000
Portugal	102.000
Belgium	76.500
The Netherland	76.000
Austria	69.000
Finland	49.000
Denmark	26.800
Norway	20.000
Luxemburg	7.500
TOTAL	3.890.200

The numbers of new lifts ordered in 2004 are:

COUNTRY	Estimated Total Market
Spain	23.834
Italy	19.300
Germany	11.660
France	10.880
UK	9.190
Greece	7.150
Turkey	7.000
Switzerland	5.820
Portugal	4.350
The Netherlands	2.920
Avustria	2.740
Belgium	2.470
Sweden	1.210
Norway	1.110
Denmark	860
Finland	840
Luxsemburg	550
TOTAL	111.884

Now, in the light of these information and my observations, I would like to point at the significance of putting into force and at the barriers in front of implementation of the SNEL norms about which Mr. Luc Rivet, ELA Secretary General, has given information and has reported the probable future practical problems.

As known, the Lifts Directive 95/16/EC of the European Union Commission requires the new lifts to satisfy adequate and sufficient safety conditions.

The Lifts Directive shows us that the probability of travelling in a safe lift is only 111,884 / 3,890,200 or simply, only 2.8%. Even if we consider and accept that lifts manufactured in conformity to this Directive are placed on the market since 1998, i.e. since only 7 years, this percentage of probability of riding in a safe lift is around 17% as of today, with the most optimistic estimations. It is also possible to witness and feel this percentage when you look at the lifts in the ordinary buildings in Europe from an expert's point of view.

Assuming that SNEL norms cannot be implemented in practice and the new lift manufacturing continues at a fixed speed, this percentage will reach 32% after 10 years and 43% after 20 years. Such a low percentage of safe lifts cannot be considered as an acceptable situation. In 2025 and in Europe, it is unacceptable to know that a lift which we are obliged to ride does not conform to the current safety conditions and requirements by a probability rate of 57%.

The economic indicators reveal that economic situation of the individuals is not so good in Europe. It cannot be denied that the wages are sufficient only to pay for the necessities of life. Under such

economic conditions, how can we expect the individuals to spend money so as to correct and improve the safety conditions of their lifts with their own will and in their own discretion. Therefore, development and improvement of safety conditions in lifts is dependent only upon non-voluntary application of the SNEL norms.

Beside the restrictions caused by economic conditions, there may be some other reasons being the source of problems in implementation of these norms. In many countries, lift is not a legal requirement in 4-storey buildings. Departing from this fact, it may be said that lifts are important and required only for the residents of 4th and upper floors. Naturally, the residents of lower floors do everything they can in order not to spend money for lifts.

Another factor is the lower level of significance shown to the lifts, being a joint property of buildings, than the personal properties.

Such approaches and events prove that the individuals have not yet come to the level of being proud of their joint properties. For a lot of people, his automobile or mobile phone or the air-conditioner in his house is far more important than the lifts in the building he lives. A person who does not feel disturbed when paying 200 EUR for periodic maintenance of his automobile tries every way in order to avoid paying his share of 10 EUR in the lift maintenance bill.

Modification of the operating lifts is a good market segment for the lift industry. To actuate and set this potential in motion will pave the way for economic revival.

The elected executive bodies in the democratic countries generally refrain from decisions or practices which may not seem nice for the electors and may require the electors to spend money from their own pockets. And this is natural. In his speech, Mr. Rivet said that SNEL has not yet been successful in Europe, and the relevant Minister was forced to postpone the effective date of SNEL norms by 2 years under pressure of the building owners in Belgium where the capital city of Europe is located.

What's interesting is that the same building owners retain their right to hold the same Minister responsible if and when an accident occurs in the lifts in their buildings. I hope the executive bodies keep this reality in mind.

Now, what does EN 81-80, or as commonly named, SNEL, which has confronted problems in becoming effective and entering into force, bring to us? Its introduction explains its conceptual rationale as follows:

Background of this Standard:

More than 3 million lifts are in use today in EU and EFTA and almost 50 % were installed more than 20 years ago. Existing lifts were installed to the safety level appropriate at that time. This level is less than today's state of the art for safety.

New technologies and social expectations have led to today's state of the art for safety. This has led to the situation today of different levels of safety across Europe causing accidents. However, users and authorised persons expect a common acceptable level of safety.

In addition, there is a growing trend for people to live longer and for disabled people to expect access and design for all. Therefore it is especially important to provide a safe means of vertical transport for disabled and elderly persons without supervision.

Lift attendants and in many cases building caretakers are not so common anymore, so it is important that relevant safety features for the rescue of trapped persons should be provided. Furthermore the life cycle of a lift is longer than most other transportation systems and building equipment, which therefore means that lift design, performance and safety can fall behind modern technologies. If existing lifts are not upgraded to today's state of the art of safety the number of injuries will increase (especially in buildings which can be accessed by the general public). With the freedom of movement of people within the EU for both users and authorised persons, familiarisation with the different installations is becoming more and more difficult.

Main approach of EN 81-80 standards is explained as follows:

This standard

- categorises various hazards and hazardous situations, each of which has been analysed by a risk assessment;
- is intended to provide corrective actions to progressively and selectively improve, step by step, the safety of all existing passenger and goods passenger lifts towards today's state of the art for safety;
- enables each lift to be audited and safety measures to be identified and implemented in a step by step and selective fashion according to the frequency and severity of any single risk;
- lists the high, medium and low risks and corrective actions which can be applied in separate steps in order to eliminate the risks.

Other designs to previous national regulations or standards, providing they have an equivalent safety level, may be acceptable.

SNEL has pointed at 74 Hazard/Hazardous situation. These articles will show the dimensions of the danger to those who know the structure and composition of the existing lifts:

1. Presence of harmful materials
2. No or limited accessibility for disabled persons
3. Drive system with bad stopping/levelling accuracy
4. No or inadequate vandal resistance
5. No or inadequate control functions in case of fire
6. Well enclosures with perforate walls
7. Partially enclosed well with too low enclosure
8. Inadequate locking devices on access doors to well and pit
9. Inadequate vertical surface below landing door sills
10. Counterweight/balancing weight without safety gear in case of accessible spaces below well
11. No or inadequate partition of counterweight/ balancing weight travel path
12. No or inadequate pit screen for several lifts in the same well

13. No or inadequate partition for several lifts in the same well
14. Insufficient safety spaces in headroom and pit
15. Unsafe pit access
16. No or inadequate stopping devices in the pit or in the pulley room
17. No or Inadequate lighting of the well
18. No alarm system In pit and on car roof
19. No or unsafe means of access to machine and pulley room
20. Slippery floor in machine or pulley room
21. Insufficient clearances in machine room
22. No or Inadequate protection on different levels In machine pulley room
23. Inadequate lighting in machine or pulley room
24. Inadequate means of handling equipment
25. Perforate landing doors and car doors
26. Inadequate design of landing door fixings
27. Inadequate glass in doors
28. No or inadequate protection against dragging of fingers on sliding car or landing doors with glass
29. No or Inadequate fighting on landing doors
30. No or Inadequate protective devices on power operated doors
31. Unsafe locking device of landing door
32. Unlocking of landing door without a special tool
33. Well enclosure with perforate walls near door locks
34. No automatic closing device on sliding doors
35. Inadequate link between panels of landing doors
36. Inadequate fire resistance of landing doors
37. Car door moving with open landing door
38. Large car area in relation to rated load
39. Inadequate length of car apron
40. Car without doors
41. Unsafe looking of car roof trap door
42. Insufficient strength of car roof
43. No or inadequate balustrade on car
44. Insufficient ventilation in car
45. Inadequate Sighting in car
46. No or inadequate emergency lighting in car
47. No or inadequate protection means on sheaves, pulleys and sprockets against injury
48. No or Inadequate protection against rope/chains leaving the sheaves, pulleys or sprockets
49. No or inadequate protection means on sheaves, pulleys or sprockets against introduction of objects
50. No or inadequate safety gear and/or overspeed governor on electric lifts
51. No or inadequate slack rope switch for governor rope
52. No protection means against ascending car overspeed on traction drive lifts with counterweight
53. Inadequate design of lift machine for electric lifts

54. No or inadequate protection against free fall, overspeed and creeping on hydraulic lifts
55. Counterweight or balancing weight guided by 2 wire ropes
56. No or inadequate buffers
57. No or inadequate final limit switches
58. Large gap between car and wall facing the car entrance
59. Excessive distance between car door and landing door
60. Now Inadequate emergency operation system
61. No shut-off valve
62. No independent starting contactors
63. No or inadequate slack rope/chain device
64. No run-time limiter
65. No or inadequate low pressure device
66. Insufficient protection against electric shock and/or marking of electrical equipment; missing notices
67. No or Inadequate protection on lift machine motor
68. No lockable main switch
69. No protection against phase reversal
70. No or inadequate inspection control station and stopping device on car roof
71. No or inadequate alarm device
72. No or inadequate communication system between machine room and car (travel height > 30 m)
73. No or inadequate load control on car
74. Missing notices, markings and operating instructions

After reviewing this list, one must ask the building owners. Which of these articles brings unaffordable costs and are the alternative costs of accidents affordable for them?

The lift industry members and their organizations must not only neglect to create counter-pressure, but also try to put forth alternative and encouraging ways. To show financial sources to the customers and to find ways of cutting the costs may be enumerated among such alternative ways. On the other hand, to create bureaucratic barriers for those who intend to modify and modernize their lifts, and to confront them with too high testing and inspection costs are discouraging. To enlarge the NoBo cake is not a requirement for continuity of existence of the lift industry. To enlarge the market cake may be to the benefit of every element active in the lift industry. Every element preventing the enlargement of market is detrimental to everyone who make money from the market.

According to the statistical data given by Ebru Gemici, Turkey represents 6% of the European lift demand, and has facilities above this percentage in terms of component manufacturing and installation companies/personnel. It is only perceived in the recent times that the Turkish manufacturers with their entrepreneurial abilities and high Euro Norm knowledge may be the solution of the problem confronted in Europe.

It must always be kept in mind that the Turkish companies have a serious potential which may contribute to expansion of the implementation of norm in Europe.

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