Machinery breakdown

Carlos Larrad
ITSEMAP Servicios Tecnológicos MAPFRE

«Despite the progress which other types of cover within the engineering line of business have experienced up until the present time, machinery breakdown continues to be one of the most widespread covers within this context, together with construction insurance.»

Machinery breakdown insurance has its origins in England in the second half of the 19th century. Since its beginnings it has been at the centre of the development of those types of insurance which are encompassed within what have become to be known as technical lines. Machinery breakdown insurance has not only been the driving force behind the development of engineering insurance, acting as a long-term solution to policies of a temporary nature (construction and assembly), but has also acted as a test bench to allow the inclusion and development of complementary types of insurance such as loss of profits, which has already become a normal part of the majority of technical lines policies. Today the engineering line of business thus encompasses the types of cover shown in figure 1.

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Figure 2 shows the premium distribution for the main types of insurance within the engineering line of business for the Spanish market. This situation is repeated in the majority of the insurance markets, where in some cases breakdown insurance may reach 42% (source IMIA).

A slight upward trend has been seen for this line of business in the countries forming part of the IMIA[1], with increases in the engineering premium vol-

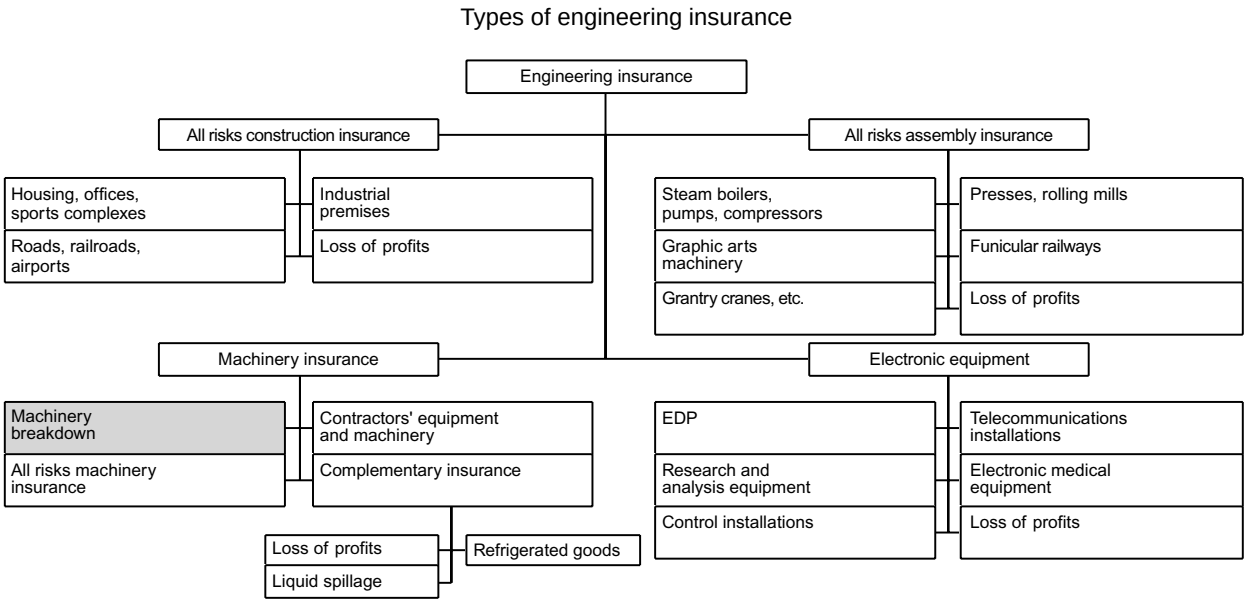
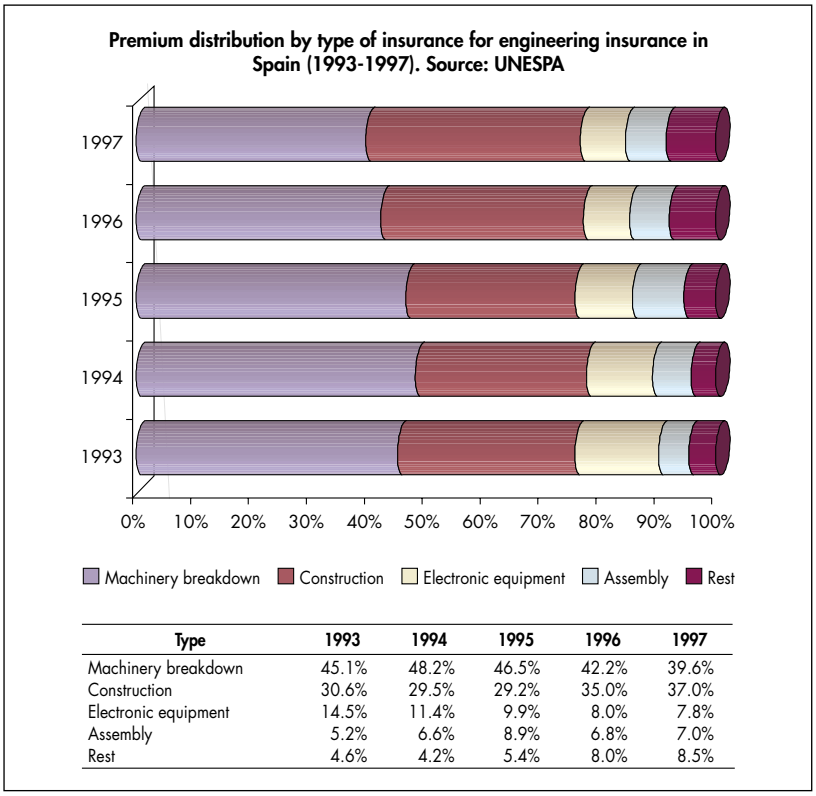


Figure 1.

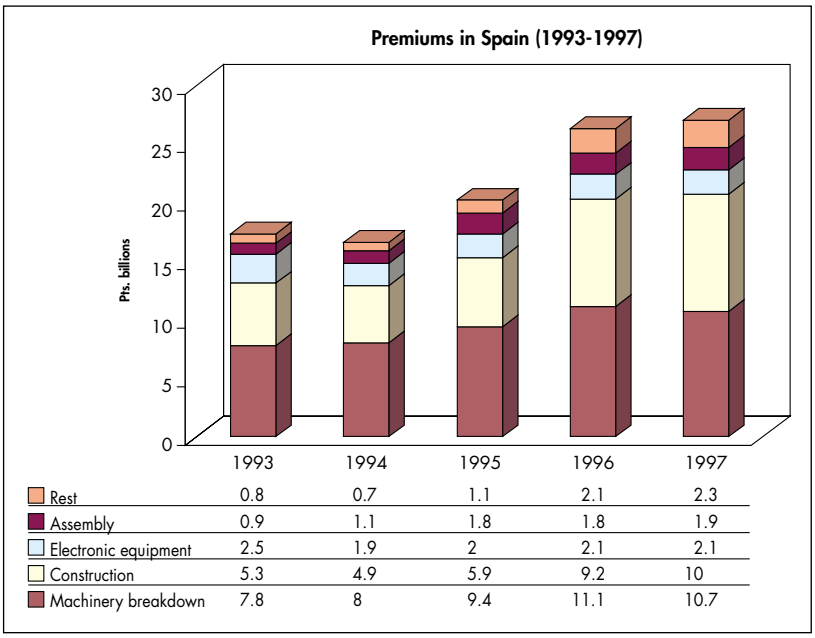
[1] IMIA is the International Machinery Insurers' Association. The insurer associations of the following countries form part of the association: Germany, Australia, Austria, Belgium, Canada, Denmark, Spain, USA, Finland, France, Great Britain, the Netherlands, Israel, Italy, India, Norway, Russia, Sweden, Switzerland, South Africa. The association holds annual meetings where the business results for engineering insurance are presented. Its head office is in Manchester (UK) and the IMIA has a web site at http://www.imia.com/



Type	1993	1994	1995	1996	1997
Machinery breakdown	45.1%	48.2%	46.5%	42.2%	39.6%
Construction	30.6%	29.5%	29.2%	35.0%	37.0%
Electronic equipment	14.5%	11.4%	9.9%	8.0%	7.8%
Assembly	5.2%	6.6%	8.9%	6.8%	7.0%
Rest	4.6%	4.2%	5.4%	8.0%	8.5%

Figure 2.

ume with respect to 1996 in the order of 2 to 5%. This slight increase which, as in the case of Spain, is close to inflation, is the direct consequence of strong competitive pressures which are causing a decrease in the rates offered by the market.



	1993	1994	1995	1996	1997
Rest	0.8	0.7	1.1	2.1	2.3
Assembly	0.9	1.1	1.8	1.8	1.9
Electronic equipment	2.5	1.9	2	2.1	2.1
Construction	5.3	4.9	5.9	9.2	10
Machinery breakdown	7.8	8	9.4	11.1	10.7

Figure 3.

This high level of competition is causing the loss ratio (claims/premiums ratio) to be kept at around the 55 to 65 percent mark, depending on whether or not there have been extraordinary losses in any one year. The combined loss ratio[2] is placed at between 90 and 105%. In the case of Spain the combined loss ratio has decreased from 95.91% in 1996 to 93.30% as a consequence of the decreases in management and commission expenses (1.7%) and in claims (0.91%).

The existence of underwriting results in a line of business with tight profit margins, when there are not losses due to extraordinary claims or deficient underwriting policies, make it necessary that risk selection through previous risk assessment be one of the principal arms of the engineering underwriter.

On the other hand, the inclusion of property damage covers in all risks policies and of complementary covers such as those typical of engineering insurance, together with a drive to reduce management costs – amongst which are those related to risk inspection – may on occasion lead to inadequate risk analysis.

For this reason, the risk analysis process should include a detailed study of not only the general aspects of the risk, such as the subjective risk, but also all the specific aspects of machinery breakdown and loss of profits due to machinery breakdown. The main parameters which should be assessed within the framework of property damage due to machinery breakdown should include:

– Maintenance
– Personnel training of the operator and maintenance staff, together with their experience.
– The characteristics of the machinery: age, features.

[2] Combined loss ratio. This is the relationship between reinsurance expenses (claims, commissions and management expenses) and ceded premiums.

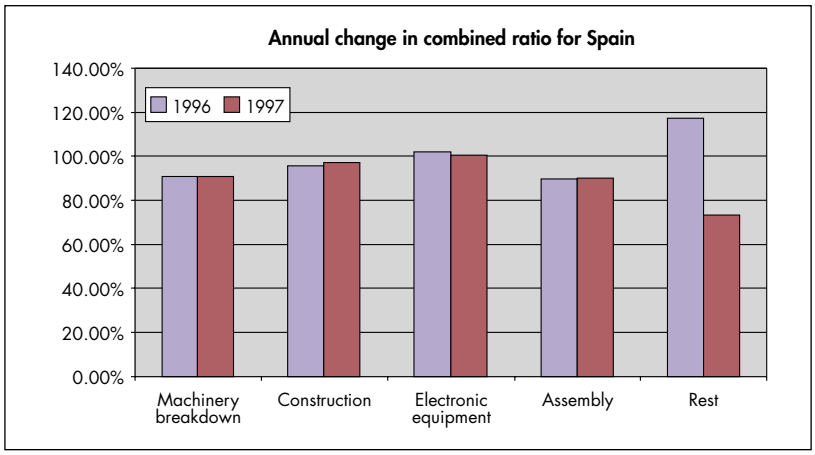


Figure 4.

– Machinery protection systems, etc.

With respect to the less frequent cover for loss of profits due to machinery breakdown, in order to combat negative risk selection processes, risk assessment should be even more rigorous, analysing not only the risk factors which determine the risk of loss of profits as a consequence of material damage (fire, lightning, explosion, etc.), but also factors affecting the insured machinery such as the following:

– Occurrence or incidence factor.
– Overloading factor.
– Utilisation factor.
– Replacement factor.
– Sub-contraction factor.

Lastly, in machinery breakdown insurance, risk assessment is equally important in both the underwriting of the policy and in the professional handling of a loss if this occurs. The diversity of machinery together with the various problems which may occur make it necessary that the loss adjuster have specialised knowledge in order to assess and adjust the property damage (knowledge of the machinery, non-destructive test methods, equipment recovery and repair systems, etc.), although this does not mean that on occasions, due to the diversity of machinery, a specialist in a certain piece of equipment is not required.

If cover for loss of profits due to machinery breakdown is brought into effect, then the loss adjuster should take into consideration all courses of action in such a way that they all aim to shorten down-time, and in consequence limit overall losses. In order to calculate a fair compensation, all those costs involved in the compensation of the property damage and those for the compensation of loss of profits must assessed. ■

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