

## IMIA - WGP 53 (07)

### Rehabilitation Works and High Coverage Limits for Existing Property



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## Summary

The exposures to existing property may vary substantially depending on type and extent of work, the value of existing property and the extent of its involvement in the works. Where a smaller contract is taken out in an environment of existing property of high value, the contractor's insurer may find it problematic to include high limits for existing property in the contract works policy. For larger projects the main contractor or consortium leader may take out contract works insurance for the full contract value and for all contractors involved. The high contract value improves the basis for granting higher limits for existing property. Whenever important rehabilitation works are undertaken and high coverage limits for existing property are required, often contract works insurance is taken out by the Principal for all parties involved. He is the most interested party in seeking the most adequate cover or covers for his interests in the existing property (as regards property damage and business interruption) and will have to look at what is available under the contract works cover and what within his existing property and machinery policies and any possible inclusions in order to supplement the cover.



## 1. Introduction

Which rehabilitation projects need insurance?

Think for just a moment of aircraft technical maintenance, which has been performed for many years to the most rigorous and scrupulously controlled maintenance standards. Yet despite all the care and skill applied, the unforeseen can happen, as a professional airman named Murphy summarised succinctly with his timeless law:

“Whatever can go wrong will go wrong”.

Contract works, whether civil engineering or plant construction, do not always concern projects on the green field with no exposure to other property existing on or near the site on which the works will be carried out. Often existing property, structures of existing plants or buildings are nearby and in an increasing number of cases are directly concerned with or involved in the work to be carried out. Old buildings, hospitals, stadiums, bridges or machinery or production facilities may need rehabilitation, renovation, overhauls, modernisation or extensions.

We can include all these kinds of works under the term of rehabilitation although they may be quite different in nature but very similar in respect of the exposure they exert to any existing, surrounding property.

Whether such existing structures are in close vicinity but not directly concerned with the contract works or the works may be constructed nearby and then connected to or interlocked with the existing structures or whether these are directly worked upon, there is always a more or less severe exposure to damage to the existing property resulting from an accident in connection with the contract works being carried out. Commonly, for such damage, the contractor will be held liable, and it is therefore often expressed in the works contract between the principal and the contractor, to which extent the contractor must come up for such damage to the existing property. For this reason, contractors as well as the principal have a great interest in seeking insurance for this exposure.

A certain cover may be granted within operational Fire, Machinery or Property All Risks covers of the existing works or property, much depending on the actual wording, but beyond this it has become a well known practice to provide insurance cover for such damage to existing, surrounding property within the contract works policy (such as CAR, EAR or project policies) covering the contractor often including the principal's interests.

The contract works insurance distinguishes between two cases of existing Surrounding Property (for example of definition, see Appendix C):

- If it is property of third party who is not concerned with the contract works either as contractor or principal in any way, such property would be covered by a Third Party Liability (TPL) cover for the contractor and /or principal. In most markets, it is common practice to include a TPL section within the contract works policy.
- If it is property of the principal of the contract works project then, especially if the property is directly connected with the works or worked upon, the

TPL cover would usually not apply and an inclusion of cover would be provided under a special extension to section 1) Material Damage of the contract works policy, usually with a loss limit and conditions describing the cover granted (for an example of definition for Existing Property – see Munich Re CAR form E334.0-E in the Appendix).

Subject of this paper is the exposure to the existing property of the principal, owner or operator and the aspects of its insurance.

The existing property can have all kinds of characteristics. It may constitute simple civil structures like roads, walls, fences but also buildings of simple or complex nature like warehouses, factory buildings, office buildings, shopping malls or industrial production plants or valuable machinery. Depending on the type and value concentration of surrounding property, the closeness of and degree of involvement in the works, the exposure may vary substantially. For the Principal the question of exposure is often not limited to material damage to the existing property and may extend to resultant business interruption.

In many cases, the limit required for covering reasonably the exposure of existing property for material damage is low in relation to the value of the contract works, and underwriters usually grant an extension for its cover at the limit requested without much hesitation. They may require more detailed information only if the risk is of critical nature, the value is of greater size or if the existing property is directly involved or worked upon. The extension of cover may then require some special conditions and limitations.

In the case of small contracts, the value of existing property often may be high in comparison with the contract value, may even be a multiple of it. This could pose a problem for underwriters insuring the contractor. Underwriters may hesitate to accept large existing property limits for small contracts, as their intention is primarily to insure the contract works for the interest of the contractor. Of the existing property, they usually have little information of its kind, technical details, values and possible exposures. This is the case especially for open CAR / EAR policies covering all contracts of a defined nature of an insured contractor.

Responsibility of the contractor for indemnifying the principal also for business interruption caused by damage to existing property is rare and would cause severe problems for the contractor's insurers. An exception may be cases, where the operation of existing plant or property is actually interrupted purely for carrying out the works on such property, and restart of operation is intended following completion of the works. In these cases, insurers would be able to provide a delay in start-up (DSU) or advance loss of profits (ALoP) cover for the contract works, which in such case would concern the existing property proper including the contract works on it.

When analysing the risks involved, it is important to know details of any existing cover (Fire, Machinery, All Risks and related Business Interruption (BI) insurances) in order to analyse what cover they provide or could include in respect of damage to the existing property resulting from the contract works. The cover may be full or limited to certain perils or subject to sub-limits or very high

deductibles. The cover may include or exclude the contractor employed for carrying out the contract works. On basis of such knowledge, it may be clearer and easier to see what complementary cover should be sought within the contract works policy to be issued.

Essential to these considerations is also the question of how the cover of existing property is to be provided. If it is left solely to the contractor of a small contract with a small value in relation to a much larger existing property value the exposure for the existing property might be the dominant issue. This exposure then also has consequences on the premium allocation by his Insurer. Also the CAR Insurer might not feel comfortable to support the high existing property limit. Alternative ways of arranging cover by the principal and the question of including a waiver of recourse against the contractor within the works contract will be discussed in this paper.

## **2. Definitions and references - what is Rehabilitation work?**

Rehabilitation work can be divided into two different areas: Construction (office, residential buildings, shopping malls, civil works, etc) and Erection (industrial plants, single machines, exchanges of parts in a machine, etc).

Rehabilitation: “to return a building or an area to its previous good condition” (Oxford Advanced Learner’s Dictionary). This means that the rehabilitation construction/erection works are carried out on or within existing property – buildings, plants and machines that of course need special attention in risk assessment, premium calculations, loss prevention etc. Here are some typical examples of rehabilitation works.

### **Example 1 - CAR**

#### **”The Låkerol Arena”, (Gävle, Sweden)**

The extension of the project is to increase the number of seats in the existing ice hockey arena from 6 300 to 8 300 and to build some additional facilities as restaurants, cafes, shops etc.

The challenge of the project is that the new arena will be built around the existing arena (picture 1) and that the project is not allowed to interfere with the ice hockey season in Sweden. During the season, there are two home games per week, in average.

The new arena is built around the old one (picture 2) with a prefabricated concrete frame which is connected to 13 framework constructions (picture 1) of which each is 75 metres long and 5,3 metres high.



Picture 1 - Frame constructions



Picture 2

The safety measures during the ice hockey games were one of the biggest challenges during the project period. Before a game, there was a security meeting

with the police, the fire brigade, the constructor and the management of the ice hockey team to find out what changes have been done since the last game and what measures must be taken during the game to keep a high standard of safety for all involved parties.

## **Example 2 - CAR**

### **Balfour Beatty AB/Skanska AB Joint Venture - Widening of the motorway M1 between junction 6A and 10 (United Kingdom)**

Widening and reconstruction the M1 junction 6A to 10 will help alleviate the strain that 160.000 vehicles a day are putting on the three-lane carriageway and prepare it for the 200.000 vehicles a day, as expected by 2023. The extent of the work is widening of the motorway M1, this includes a construction of new bridges and demolition of old ones. Earthworks will be carried out to provide space for the additional lane. The work shall be carried out without any disturbance in the daily traffic on the M1.



#### **Third party exposure**

The main challenge in this project is to allow the traffic to run without any disturbance during the project and minimize the number of accidents in connection with the project. The number of accidents is constantly measured and then compared with the number before the start of the project. Some type of contractual fines are payable for disturbance in the traffic during this type of project.





There is also an environmental risk in this type of project: a risk for oil leakage of from the construction equipment, water pollution if there will be impurity in the material, which is used in the embankments, subsidence in buildings in the surrounding of the site, etc.

### **Example 3 - Combined exposure of Existing Property and Third Party Liability (TPL)**

**Rebuilding of the shopping mall "Skärholmen Centrum"**



During the year 1955, it was decided that a number of local shopping centres should be built in the suburbs of Stockholm. One of them Skärholmen Centrum was finalized in 1968. The first rebuilding project in this shopping mall was performed during 1984, when a glass roof was constructed over the central street of the shopping mall. The whole shopping mall is going to be updated during 2006 and 2007, with additional glass roofs and with an increased area for shopping. A total area of 200,000 square metres, 200 shops with about 8 million visitors per year and a parking area for 3,000 cars will be affected by the project.

The major challenge during the project is to keep about 130 shops open for business and to avoid contamination of the area with dust etc., from the construction works.

- Fire is the risk, which will have the biggest impact. Before the project, there was a comprehensive investigation about the fire protection to be provided for the existing shopping mall, how to secure the safety of the workers and the people shopping during the construction period.
- Dust is a problem for contamination of the goods in displays in the shops, and for the inconvenience of visitors and employees.
- Objects falling down from the construction site with the risks of hurting people and property are sometimes a real problem during the project.
- The transportation of goods through and along the mall, to the local construction areas can also create problems for the residents, the principal and the customers.

### **3. To what extent do Property Damage / Business Interruption and Machinery Breakdown policies cover rehabilitation works?**

#### **3.1 Typically, Property Damage/Business Interruption policies:**

Exclude damage to property or structures in the course of construction or erection and materials or supplies in connection with all such property in the course of construction or erection or consequential loss arising therefrom

Contain a condition that the policy shall be avoided with respect to any of the property insured about which there is any alteration after the commencement of the insurance

- a. by removal or
- b. whereby the risk of Damage is increased or
- c. whereby the interest of the Insured ceases except by will or operation of law

Unless admitted by the Insurers in writing, except that workers are allowed in and about the Premises for carrying out minor alterations, decoration, repairs, general maintenance and the like.

Therefore, if an Insured is going to undertake works on his premises that constitute anything other than minor alterations, decoration, repairs or general maintenance or the like, he needs to notify his insurers and seek their agreement to maintain cover on the premises.

Similarly, if an Insured requires cover for the contract works themselves under his Property Damage/Business Interruption policy, he will need the insurer's agreement to this in respect of both, material damage as well as Business Interruption. However, a Property Damage policy form is not the ideal vehicle for insuring contract works as it is designed primarily for insuring static operational risks. A Property Damage form contains a number of policy provisions that are inappropriate for construction/erection risks and not found in a CAR/EAR forms e.g.:

Exclusions of:

- collapse or cracking of buildings or structures unless resulting from a Defined Peril (i.e. Fire and other specified perils)
- the bedding down of new structures or the settlement or movement of made up ground
- damage to moveable property in the open by wind, rain, hail, sleet, snow, flood, sand, dust or freezing

NOTE: Property Damage/Business Interruption policies can be extended to include:

- the peril of Machinery Breakdown
- some automatic cover for Contract Works, usually subject to an inner limit. However, care needs to be exercised in the drafting of such an extension to ensure the cover provided is appropriate (see comments above regarding the inappropriateness of some PD/BI policy provisions).
- some automatic Delay in Start Up cover in respect of Contract Works, subject to an inner limit but PD/BI underwriters are often averse to offering this, even with a low inner limit.

### **3.2 Machinery Insurance policies**

Typically, a Machinery Insurance policy will contain the following provisions:

Perils Insured: Unforeseen and sudden physical loss or damage from any cause not specifically excluded

Policy cover: The Policy shall apply to the insured items after successful completion of their performance acceptance tests whether they are at work or at rest, or being dismantled for the purpose of cleaning or overhauling, or in the course of the previously mentioned operations themselves, or when being shifted within the premises, or during subsequent re-erection.

Machinery and Plant insured: Per description of Machinery Insured in the Policy Schedule

Exclusions

Loss or damage due to fire, direct lightning, chemical explosion (except flue gas explosion in boilers), extinguishing of a fire or subsequent demolition, aircraft or other aerial devices or articles dropped therefrom, theft, burglary or attempts

thereat, collapse of buildings, flood, inundation, earthquake, subsidence, landslide, avalanche, hurricane, cyclone, volcanic eruption or similar natural catastrophes

Loss or damage for which a supplier, contractor or repairer is responsible either by law or under contract

Conditions

Notification to Insurers of material change in risk

No material alteration shall be made or admitted by the Insured whereby the risk is increased, unless the insurers confirm the continuance of the insurance in writing.

### **3.3 The Property Damage/ Business Interruption underwriter's approach**

Where underwriters are covering existing property that is to undergo rehabilitation works that are anything other than minor alterations, decoration, repairs, general maintenance or the like, the Insured will normally have to seek his insurer's agreement to provide cover.

By way of example: Under the standard Joint Contracts Tribunal (JCT) form of building contract in the UK, in the case of alterations of or extensions to existing structures, the Employer/ Owner is required to effect in the joint names of the Employer/Owner and the Contractor an All Risks insurance on the Works and a Specified Perils insurance on the existing structures and their contents owned by the Employer/Owner or for which he is responsible. Insurers will have no right of recourse against any person named as an insured on the policy.

Specified Perils means fire, lightning, explosion, storm, flood, escape of water from any water tank, apparatus or pipes, earthquake, aircraft and other aerial devices or articles dropped therefrom, riot and civil commotion, but excluding Excepted risks (as defined elsewhere in the contract).

The Employer/Owner would normally effect a CAR policy on the Works and seek cover for the existing structures and the contents thereof for Specified Perils under his annual Property Damage/Business Interruption policy.

Property underwriters are in many cases wary of providing the full range of Specified Perils required by the JCT contract (in particular, the water damage perils) and are often unenthusiastic about including the Contractor as an insured party under the policy. They may:

- seek to limit the perils they provide cover for and/or
- refuse to name the Contractor as an insured, on the basis that they want to retain their rights of recovery against the Contractor. If they agree to include the Contractor as an insured under their policy, this may be limited to the Property Damage cover thereby retaining insurer's rights of recovery in respect of any Business Interruption loss and/or
- apply increased Excesses.

### **3.4 The Machinery Insurance underwriter's approach**

The Machinery / Machinery Loss of Profits insurer would normally consider any kind of work on the existing insured machinery covered under his policies if these works fall under normal maintenance, inspection, servicing, overhauling or moving around on the premises within the sense of carrying out all kind of work associated with the operation of the insured's business. Even repair of machinery may be included if done within the premises. Often the insured's own or the operator's staff is involved in these works and may include planning and supervision. Insurance is in any case restricted to the cover provided under the Machinery / Machinery Loss of Profits policies, i.e. the typical exclusion of fire perils etc., apply.

For more extensive work, especially if a contractor takes over responsibility for the machinery or removes it from the premises, or introduces new plant or machinery, the insurer of the existing property would not consider this covered under his policies and would expect that these works are insured under a contract works policy and such cover would include an extension to insure existing property at least for material damage at a reasonable limit.

As regards, Business Interruption damage to existing property we need to distinguish between

- a) property directly worked upon and taken out of operation during the construction period or possibly being replaced or extended by new or additional plant, and
- b) Adjacent property that continues operation, but could be affected by an occurrence extending from the contract works.

If case a) applies, an Advance Loss of Profits (ALoP)/Delay in Start-up (DSU) cover can be taken out for the plant or machinery involved in the works and attached to the contract works cover (covering the Business Interruption interest of the principal for the plant / machinery involved). Therefore, the existing Machinery / Machinery Loss of Profits insurer need not provide Business Interruption cover during the construction period.

For case b) Business Interruption (Loss of Profits), cover is unlikely to be obtained from the contractor's insurers, at least for the full Business Interruption sum insured that would be insured under a normal MLoP policy, and therefore confirmation of cover by the holding insurer(s) of any Machinery Loss of Profits, Fire Loss of Profits or similar existing cover must be obtained, considering that recourse from the contractor or his insurer is unlikely to be obtained or is excluded by way of a Waiver of Recourse agreement.

### **3.5 Operational Power Plant peculiarities**

These Property Damage/Business Interruption risks are, in the main, placed with insurers operating in the Energy/Power markets on All Risk forms, including cover for Machinery Breakdown - with the predominant risk being Machinery Breakdown.

Underwriters are, in some cases, prepared to include an extension to provide automatic cover for Contract Works, usually subject to an inner limit - perhaps, USD 10m – USD 20m - and they will include the contractors as insured parties under this extension, usually for their on site activities only (i.e. they will often not cover the contractor in respect of any warranty type exposures).

Underwriters may also be prepared to include an extension to provide automatic Delay in Start Up cover in respect of Contract Works. The limit under this extension is likely to be a combined one with the limit under the Contract Works extension. The contractors will not be an insured party under this extension. Where a contractor is undertaking works within an existing plant, dependent upon the nature of the works to be performed, underwriters may be prepared to include the contractor as an insured party and/or waive subrogation rights against him under the Property Damage section of the policy. Underwriters may not favour to agree to this where the works involve high-risk activities e.g. work within a turbine.

#### **4. Cover for Rehabilitation Works under CAR and EAR policies**

##### **4.1 Contractor's All Risks policies (CAR)**

Examples of requests to cover existing property under a CAR / EAR policy are as follows:

Owners/ developers of existing property (an existing office block, hotel or shopping mall, for example) who intend undertaking a major refurbishment/ redevelopment of the property.

In such cases, the owner/developer is investing significant sums of money and may wish to control the insurances for the project by effecting an owner controlled programme embracing the insurance on the works and the existing structure and the delay in start up risk. The delay in start up risk is a significant risk for him and, as the delay in start up cover is triggered only by an indemnifiable loss under the material damage insurance of the works and the existing structure, it is important for the owner/developer to obtain as broad a material damage cover as possible for the works and existing structure. The existing structure could be anything from the retained façade of the building to the entire building.

Property underwriters are, on the whole, not entirely comfortable with construction risks and will often only be prepared to provide cover on a limited perils basis for the existing structure. Therefore, the owner/developer turns to the CAR underwriter, who understands construction risks, to insure the risk, in conjunction with the works and delay in start up risk.

Such owner/developer controlled programmes generally cover

- all the participants in the project (the owner/developer, the contractor and all subcontractors of any tier) in respect of the material damage risk to the works and existing structure

- only the owner/developer in respect of the delay in start up risk (the insurer may have recovery rights against the contractor for this element of the programme to the extent of those rights under the terms of the contract between the owner/developer and the contractor).

In case of PPP (Public/Private Partnerships) projects involving infrastructure type works – roads, bridges, tunnels, hospitals, schools, prisons, government/local authority offices, power plants etc., sometimes the Concession Company (i.e. the company that is to build and operate the facility for a period of years) has to take responsibility for existing property as well as the construction of the new facility. For example, a Concession Company may have to take over responsibility for an existing road (including bridges and other structures on that road) which he is to work on (widen it or extend it, etc.).

The Concession Company is in a similar position to that of the owner/developer in the example above and will want to control the insurances for the project. Indeed, the Lenders to the Concession Company will usually demand that the Concession Company effects a project specific insurance programme embracing insurance on the works, the existing property that he is responsible for and the delay in start up risk.

#### **4.2 The CAR underwriter's approach**

The CAR underwriter will, in most cases, be prepared to entertain the insurance of existing property under a CAR policy, as he understands the risks associated with construction.

This insurance can be provided on any of the following bases:

- Cover is limited to damage caused by or arising out of the works and with a "first loss" sum insured, or limit of indemnity any one occurrence or
- Cover is provided on a Difference in Perils basis to the cover provided under the Property policy (with or without a "first loss" sum insured/ limit of indemnity) or
- Cover is provided on an All Risks basis (with or without a "first loss" sum insured/ limit of indemnity). For example, an Insured may consider a "first loss" sum insured/ limit of indemnity to be adequate for an existing road.

How the delay in start up cover is triggered is an important consideration for any Insured. For that reason, full All Risks cover under a CAR policy is often favoured by an Insured.

In the London market, cover for existing property may be provided on a CAR wording with the following additional features:

- Basis of Settlement: Reinstatement as new.
- Exclusion of loss, destruction or damage caused by an inherent defect therein or any defect existing therein at the commencement of the works
- A policy Excess applicable to the existing property commensurate with the risks that that property will be exposed to in the course of the works.

However, CAR underwriters are not comfortable with insuring existing property on an All Risks basis where the sum insured/ value of such property is disproportionate to the value of the works - where the predominant exposure becomes the existing property.

The next best option in those circumstances, from the Insured's perspective, may then be to insure the principal fire perils on the existing property under a Property policy and insure the property on a Difference in Perils basis under a CAR policy.

The Insured then has to ensure that his delay in start up risk is properly structured. In the event of one of the principal fire perils affecting the existing property, it is likely that the same peril will also damage the works. It would be logical, therefore, for the delay in start up section of the construction policy to be structured such that it is only triggered by an indemnifiable loss under the CAR section of the policy and/or the Property policy.

As mentioned previously, delay in start up insurance will be arranged on behalf of the owner/developer only and Insurers may have rights of recourse against the contractor (dependent upon the terms of contract between the owner/developer and the contractor - the contractor's liability for delay in completion of the works is if at all, limited under contract to a specified rate of liquidated damages, if such responsibility is not excluded in the contract conditions).

### **4.3 Machinery Erection All Risks policies (EAR)**

Example of a request to cover existing property under an EAR policy:

A pulp and paper manufacturer enters into a contract with a contractor for the supply and installation of a new machine in one of the manufacturer's factories. The contract requires the contractor to effect EAR insurance on his works and that the EAR insurance is to be extended to provide cover for loss of or damage to surrounding property of the manufacturer subject to a limit of X.

### **4.4 The EAR underwriter's approach**

The EAR underwriter will generally be prepared to entertain the insurance of existing property under an EAR policy but usually only on the following basis:

- Cover is limited to loss, destruction or damage caused by or arising out of the works
- A "first loss" sum insured, or limit of indemnity any one occurrence applies.

In the case of an Owner controlled programme, the EAR underwriter will usually be prepared to include the Contractor and/or subcontractors of any tier on the above basis and/or to waive subrogation rights against the Contractor and/or subcontractors of any tier.



Any Delay in Start up cover for the project will be in the Owners name only and insurers retain recovery rights against the Contractor and/or subcontractors only to the extent that the Owner has recovery rights against the contractors. The delay in start up cover is triggered by loss or damage to the works and not to existing property unless directly under construction and to be taken into operation after completion of the works, provided such damage is indemnifiable under the material damage section of the programme. In Engineering business, it is often practice for the contractor's liability, that consequential losses are either excluded or limited under a contract to specified rates of Liquidated Damages for delay in completion of the Works.

In respect of existing property continuing operation during construction works i.e. not directly involved in the works, a Delay in Start up cover does not apply and BI cover may exist or may be provided under a Property and/or Machinery Loss of Profits policy of the owner or may need to be extended to include consequential loss due to damage resulting from the construction works.

## **5. Examples of providing Existing Property cover under Contract Works Insurance**

### **5.1 General considerations**

For rehabilitation works on existing building, plant or machinery it is very important to consider what insurance cover would be needed and what insurance cover is available on the insurance market. A rehabilitation contract (a supply, service and erection contract) requires the contractor or the principal to arrange insurance against physical damage from any cause to the items to be supplied, re-built, erected, serviced, maintained etc., as well as existing property.

Possible Insurance covers to be considered for rehabilitation works are – CAR (Contractor's All Risks insurance) or EAR (Erection All Risks insurance) or other forms of contract works insurance with special attention to works on or near Existing Property and maybe DSU (Delay in Start-up) as regards the contract works proper.

When considering extension or inclusion of cover of existing property to a contract works policy, underwriters need to consider a number of points essential for evaluation of the risk involved. These points may include the following items:

- Details of contract works to be carried out
- Description of existing plant / machinery directly involved
- Description of existing / surrounding property, estimated value(s), vicinity, separation measures taken?
- To what extent is planning, design, staff and/or supervision of the principal involved?
- What responsibilities of the contractor are fixed in the works contract as regards existing / surrounding property?
- Has any waiver of recourse been agreed? Details of agreement? Deductibles and limits? Or can such waiver be agreed?
- What cover is provided under existing property / machinery insurances?

- Would these apply primary, secondary or proportionally to a cover under contract works insurance?
- What is the situation regarding business interruption for existing plant (taken out of operation during the works or continuing operation)?
- What gaps of cover do exist?
- How is the existing / surrounding property and possibly BI cover to be arranged? / Possible Options?
- What is / are the most appropriate solution(s)?

In cases of low values of existing property or low values compared with the insured contract value, inclusion of cover for its material damage under a contract works policy is usually granted without problems.

High coverage limits however may very well constitute a problem for a number of reasons which include reluctance to cover risks where a major portion of exposure is not the actually insured contract works, but the existing property, lack of detailed information on kind, values involved, vicinity, degree of actual exposure etc.

## **5.2 Cover under a Contract Works policy for an individual contractor**

If the works involve only or mainly one specific contractor he may take out the contract works insurance with his usual insurer or he may even have an open policy for all contracts he usually carries out.

In such cases, the underwriter of the contract works policy is usually in the above-mentioned difficult situation. He may either

- accept the risk of an unbalanced high existing property limit, if he is able to judge the risk and get an adequate premium loading accepted by the contractor or
- try to cover only a reasonably reduced limit and leave the excess either uncovered or taken over by the principal or
- have a waiver or recourse agreed between the contractor and the principal or
- decline cover and suggest a principal controlled insurance.

## **5.3 Principal controlled Insurance**

Many complicated rehabilitation works contracts are no exception to Murphy's Law. In the rehabilitation contract business, there are countless possibilities for human error, technical mishap, equipment failure, unknown upcoming technical difficulties, etc.)

Principal Controlled Insurance means:

- one single policy for the whole project
- combined Principal's and Contractor's insurance

It is the concept of the Principal effecting a project insurance, covering all parties involved in the project.



The insurance cover should be in accordance with CAR (Contractor's All Risk), EAR (Machinery Erection All Risks), Comprehensive Project insurance or similar conditions.

The insurance period of cover starts with the commencement of work or after delivery/unloading of goods at site and expires for the insured works when taken over by the principal or taken into commercial use. The Principal requires also extension of insurance to cover his Existing Property and Third Party Liability for Third Party Property.

#### Principal Controlled Insurance

- **covering the whole project, the total contract value**
  - **for all parties involved**
- including
- **Existing Property**
  - **Third Party Liability**
  - **Delay in Start-up**
  - **Etc.**

The Principal insures the total contract value including the interest of all contractors and sub-contractors (but for projects, where the Principal has a high net retention, the contractor/sub-contractor may have his works additionally

insured up to a limit corresponding to the Principal's deductible).

It may be appreciated that a Principal Controlled Insurance has a number of advantages for very large and complex projects where many different contractors and sub-contractors from many countries are involved in the project. It may also be easier for a "large" contract owner (principal) to get insurance protection for a high limit for Existing Property.

**Delay in Start-up (DSU)** - in this document the considerations are restricted to cases where existing property is worked upon and taken out of operation during the works!

Special attention should be given to requests for insurance cover for Delay in Start-up, DSU (also defined as Advance Loss of Profits/ ALoP). Delay in Start-up cover normally provides indemnity to the insured Principal for loss of profits that the insured has sustained due to the contract works being delayed because of a loss or damage to the property insured under the terms of the material damage – CAR/EAR – policy. For example, the Principal may require a DSU cover, if he has an extensive rehabilitation project for an office block, and his business is dependent on the works being completed at a certain date, e.g. the date where after the offices are being let and the tenants would pay rent.

If a loss is sustained by the contract works and the rehabilitation works cannot be completed by the given date, then the Principal will lose rentals that he would have received from the tenants had they taken occupation of their respective offices in time.

The DSU cover provided can be quite difficult to estimate and therefore it is recommended to obtain full details concerning the proposed project, the occupation by tenants, rental payments and the proposed indemnity period required.

#### Note

A Delay in Start-up (DSU/ALOP) insurance is dependent on and linked to the terms and condition of a CAR/EAR or similar construction project cover.

In cases where contract works are very close or more or less integrated with an existing plant which continues operation during the construction period, it is recommended to obtain all details about the existing operation. And for the insurer of the business of the existing operation it is essential to estimate the "increased operational risk" due to the contract works going on within or around the complex of the existing operational plant.

## 5.4 CAR - A tailor made solution

Sometimes only, a part of an existing structure or building is retained to be part of a rehabilitated structure or building. Therefore, a property policy can no longer be in force to cover only a part of an unoccupied structure or building, which is furthermore endangered by the new works.

This is the case for instance when old buildings from the 19<sup>th</sup> or even the 18<sup>th</sup> century, which may be listed protected buildings, undergo a structural renovation/rehabilitation. A building permit is granted under the prerequisite that the old façades must be maintained. This means also that, if a façade is damaged during the works, it has to be reconstructed exactly in the same way as it was before the damage. Very often, the complete interior structure is demolished and only the façades are retained and must be sustained and protected during the new works. One of the most dangerous activities is the excavation of new underground floors.



It is very difficult to assess properly the value of the existing façades. For this purpose, there is no other way than to determine how the façades could be repaired or reconstructed. Should for example stones from the original quarry be used or would it be allowed to use some other materials? It can turn out that the value of the existing façades is more or less equal to the value of the new contract works.

As the façades are going to be structurally interconnected with the new interior structure and in the end, be part of the rehabilitated building, it is usually required that the contractor accepts full responsibility of the existing structures until completion of the works. One could either consider this fact by adding the value of the façades to the contract value of the new works. By doing so, the risk exposure near the end of the construction time would be correctly taken into account, but the risk exposure at the beginning would require special attention. This is because the value at risk for a normal CAR risk varies more or less in a straight line from zero at the beginning to the total sum insured at the end of the construction time.

Alternatively one could take the fact of the full value of the façades being at risk during the whole construction period into consideration by stating the estimated reconstruction value of the façades as sum insured of the existing property.

Whatever the procedure, the underwriter must take the real risk exposure adequately into account when rating the required premium.

Assessment of such a sophisticated risk has to be made by an experienced CAR-underwriter. The best solution for the insured would be a tailor made CAR policy.

## 7. Loss Example

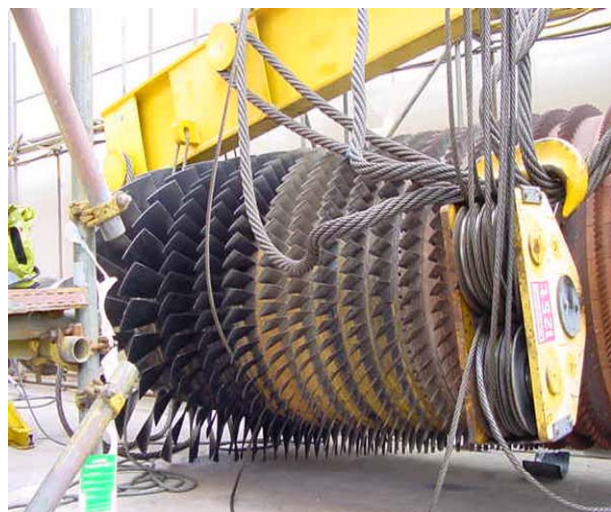
A major loss occurred to existing property during a contract for replacing some blades of a gas turbine

During a planned outage of a gas turbine power plant in order to replace a number of blades, a crane failed while lifting the rotor out of a gas turbine.

The rotor of massive weight sank to the ground with resultant damage to various parts of the rotor. The supports - prepared to receive the rotor - were hit by the coupling flange on one side and by turbine blades of row 1 on the other side and were pushed away a few metres. The balancing beam and the steel ropes of the lifting equipment fell onto the rotor additionally damaging the area of compressor stage 1. The crane trolley hit compressor blades in the area of the stages 14 to16. On the turbine side, several blades of four rows were affected, and the straightness of the rotor was doubtful.



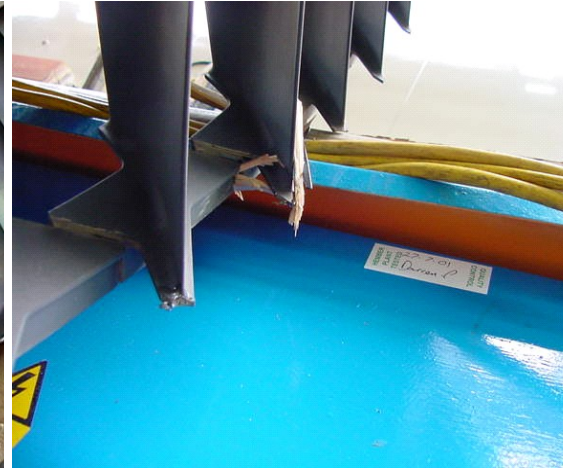
Compressor blades



Compressor section with beam on top



Turbine end hitting the ground and...



The scaffold → broken shroud edge

Inspection and repair of the rotor involved a complete disassembly of the blades in order to allow detailed checks on the rotor as well as on the blades. It was necessary to send the rotor and the blades back to the manufacturer. In the meantime a new rotor including new blades was ordered. This allowed recommissioning of the gas turbo set two months after the accident.

Repair of the damaged rotor was achieved within 4 months which served then as a spare.

Appendix A

Proposal of cover of existing property (EP) for different cases :

Case 1 Small contract / high EP value	Case 2 Open CAR/EAR policy / unknown EP value	Case 3 Large individual contract / high EP value	Case 4 Comprehensive project/ high EP value
Case A) existing property <b>not directly involved</b> and <b>operation continuing</b>			
<p><b>a) Material damage: CAR/EAR Policy:</b> reasonably low limit or full exclusion, espec. if non-recourse agreed. Cover preferably within <b>existing PD covers</b> (increased risk usually accepted)</p>	<p><b>a) Material damage: CAR/EAR Policy:</b> reasonably low limit. Increase on merits case by case. Additional/excess cover recommended within <b>existing PD covers</b> (increased risk usually accepted)</p>	<p><b>a) Material damage: Car Policy:</b> higher limits possible. Additional/excess cover may be required within <b>existing PD covers</b> (increased risk usually accepted)</p>	<p><b>a) Material damage: Car Policy:</b> higher limits possible. Additional/excess cover may be required within <b>existing PD covers</b> (increased risk usually accepted)</p>
<p><b>b) Business interruption:</b> Usually most difficult for CAR/EAR insurers (possibly as liquidated damages) Usually increased risk accepted under <b>existing BI covers</b>.</p>	<p><b>b) Business interruption:</b> Usually most difficult for CAR/EAR insurers (possibly as liquidated damages) Usually increased risk accepted under <b>existing BI covers</b></p>	<p><b>b) Business interruption:</b> Usually most difficult for CAR/EAR insurers (possibly as liquidated damages) Increased risk not easily accepted under <b>existing BI covers</b></p>	<p><b>b) Business interruption:</b> Usually most difficult for CAR/EAR insurers (possibly as liquidated damages) Increased risk not easily accepted under <b>existing BI covers</b></p>

Proposal of cover of existing property (EP) for different cases :

Case 1 Small contract / high EP value	Case 2 Open CAR/EAR policy / unknown EP value	Case 3 Large individual contract / high EP value	Case 4 Comprehensive project/ high EP value
Case B) existing property <b>directly involved</b> and <b>operation not continuing</b>			
<p><b>a) Material damage: CAR/EAR Policy:</b> reasonably low limit or full exclusion, requires non-recourse agreement. Cover preferably within <b>existing PD covers</b> (increased risk usually accepted)</p>	<p><b>a) Material damage: Car Policy:</b> reasonably low limit. Increase on merits case by case. Additional/excess cover recommended within <b>existing PD covers</b> (increased risk usually accepted)</p>	<p><b>a) Material damage: Car Policy:</b> higher limits possible. Additional/excess cover may be required within <b>existing PD covers</b> (increased risk not easily accepted), unless contractor fully responsible for EP and value included in sum insured (see Case 4)</p>	<p><b>a) Material damage: Car Policy:</b> high limits under Comprehensive Project policy of principal. No cover under <b>existing PD policies</b> required, if all value insured under the Project Policy</p>
<p><b>b) Business interruption:</b> Usually possible under a delay in start-up (DSU) policy, but maybe at very limited DSU sum insured</p>	<p><b>b) Business interruption:</b> Usually possible under a delay in start-up (DSU) policy, but only case by case</p>	<p><b>b) Business interruption:</b> Usually possible under a delay in start-up (DSU) policy</p>	<p><b>b) Business interruption:</b> Usually possible under a delay in start-up (DSU) policy</p>



## Appendix B – Property wording examples

### Property Wording that excludes construction/erection works:

#### ABI Recommended Standard All Risks Policy

Exclusions:

...

11.2 property in transit

...

12.2 property of structures in course of construction or erection and materials or supplies in connection with all such property in course of construction

12.3 land, roads, piers, jetties, bridges, culverts or excavations

### Property wording that provides limited named perils cover for construction/erection works

#### IF Combined Industrial All Risk Insurance

D. General Exclusions

...

D.2.11 This Policy does not cover Damage or Business Interruption Loss caused by or consisting of

- a) construction, erection or demolition work other than routine maintenance, unless resulting from a Defined Peril \*. Routine maintenance is here understood to mean maintenance work amounting in total to EUR 400.000

\* Defined Perils

Shall mean fire, lighting, explosion, windstorm, falling aircraft or aerial device or impact by any road vehicle or animal

### Example of a very wide Property Cover including cover for buildings under construction

#### FM Global Advantage wording

PROPERTY DAMAGE - SECTION B

INSURING CLAUSE

This Policy insures against all risks of direct physical loss or damage to property insured by this Policy occurring during the policy period except as hereinafter excluded.

PROPERTY INSURED

This Policy insures the following property, unless otherwise excluded elsewhere in this Policy, located at an Insured Location or within 1,000 feet thereof, to the extent of the interest of the Insured in such property.

- A. Real Property, **including new buildings and additions under construction** at an Insured Location, in which the Insured has an insurable interest.

.....

This Policy also insures the property of contractors and subcontractors during construction at an Insured Location or within 1,000 feet thereof, to the extent of the Insured's legal liability for insured physical loss or damage to such property.

.....

C. This Policy excludes the following, but if physical damage not excluded by this Policy results, then only that resulting damage is insured:

1) faulty workmanship, material, construction or design from any cause.

.....

TIME ELEMENT - SECTION C

.....

PERIOD OF LIABILITY

A. The PERIOD OF LIABILITY applying to all TIME ELEMENT COVERAGES, except GROSS PROFIT and LEASEHOLD INTEREST and as shown below, or if otherwise provided under the TIME ELEMENT COVERAGE EXTENSIONS, is as follows:

.....

2) **For building and equipment under construction:**

- a) The equivalent of the above period of time will be applied to the level of business that would have been reasonably achieved after construction and start-up would have been completed had no physical damage happened; and
- b) Due consideration will be given to the actual experience of the business compiled after completion of the construction and start-up.

This item does not apply to COMMISSIONS, PROFITS and ROYALTIES

## **Appendix C - Explanation of Insurance of Existing / Surrounding Property**

CAR-Form E 334.0-E (Munich Re)

### **Insurance of surrounding property**

The following contains some information on the insurance of existing structures within the construction area or in its immediate vicinity insofar as this can be included under the CAR policy.

The type and arrangement of the insurance cover largely depends on the ownership of or title to the property concerned as indicated in the CAR policy, although the actual risk to the insurer is virtually the same in any case. Neither the possibility or probability of loss nor the amount of the expected loss can be considered independently of the factors of ownership or title.

Risks of this kind are handled differently in the case of

- a) buildings belonging to or held in care, custody or control of persons named in the policy as the insured, and
- b) buildings belonging to or held in care, custody or control of persons who may be regarded as third parties for the purposes of the policy, i.e. persons who are neither insurers nor insured.

In the first case, the surrounding property can only be insured in the context of Section 1 of the policy by means of an endorsement (see Appendix D). The insurer is liable only for property damage to the buildings as a result of the construction work insured under the policy and is only obliged to reimburse costs which may be incurred in carrying out repairs. Additional cover for claims in respect of loss of rent or loss of use of the damaged buildings cannot be supplied.

In the second case, indemnity is payable according to the principles of third party liability insurance as set forth in Section 2 of the CAR policy. However, losses resulting from the removal or weakening of supports of load-bearing structures or due to vibration are expressly excluded from this type of cover (they may, however, be included on request in return for an extra premium).

In case a), as well as in case b) if the additional hazard of removal or weakening of supports of load-bearing structures is included, it is important to examine each risk individually to determine its special characteristics when fixing the amounts of the premiums and deductibles. It is impossible to lay down any general guidelines in this respect. Reports on the condition of the surrounding buildings should therefore always be prepared before the construction work commences; if possible, photographs recording their condition should also be taken and a thorough investigation conducted into the possible hazards to the buildings to be insured. Particular attention should be paid to the proposed construction methods and to whether these will endanger the buildings in any way, as well as to the arrangements made to ensure the safety and maintenance of these buildings.

## **Appendix D – Example of wordings providing Existing Property cover under a Contract Works policy**

By default CAR/EAR policies often do not include Existing Property cover. It can however be included by additional insurance cover, by separate endorsement or if specified in the schedule of the policy.

Some typical examples of endorsements (Endorsement 119 of Munich Re, Munich Re Project Works Cover, EPI 03 of Swiss Re) are shown in the Appendix.

This cover applies for existing property or property belonging to or held in care, custody or control by in the insureds of the policy (i.e. Principal and Contractors). It does not apply to existing property of third parties.

It is designed for existing structures or buildings located on or adjacent to the site and does not apply to construction/erection machinery and construction/erection plant or equipment. Standard covers are usually restricted to the material damages section (i.e. Section 1) and not to any loss of profits or loss of rent.

Under these standard clauses cover is limited to losses that are caused by or arising out of the construction/erection works.

Underwriters are, however, often prepared to entertain full All Risks cover.

Other limitations or exclusions often used are:

- Foreseeable loss or damage due to the construction works is excluded (e.g. heavy vibrations that likely will cause damages)
- Loss prevention costs
- For vibration, removal, weakening of support other losses than to total or partial collapse losses (e.g. superficial damages that do not impair the stability)
- Pre-existing damage (e.g. cracks in walls). In order to identify pre-existing damages a special survey of existing structure might be necessary.

### **Munich Re Endorsement 119**

#### **Existing property or property belonging to or held in care, custody or control by the insured**

It is agreed and understood that otherwise subject to the terms, exclusions, provisions and conditions contained in the Policy or endorsed thereon and subject to the Insured having paid the agreed extra premium, Section 1 of this Policy shall be extended to cover loss of or damage to the existing property or property belonging to or held in care, custody or control by the Insured caused by or arising out of the construction or erection of the items insured under Section 1.

Insured property:

Sum insured:

The Insurers shall only indemnify the Insured for loss of or damage to the insured property provided that prior to the commencement of construction, its condition is sound and the necessary safety measures have been taken.

In respect of loss or damage caused by vibration or by the removal or weakening of support Insurers shall only indemnify the Insured for loss or damage as a result of a total or partial collapse of the insured property, and not for superficial damage, which neither impairs the stability of the insured property nor endangers its users.

The Insurers shall not indemnify the Insured for

– loss or damage which is foreseeable having regard to the nature of the construction work or the manner of its execution,

– the costs of loss prevention or minimization measures which become necessary during the period of insurance.

Deductible:

Extra premium:

## **Munich Re Comprehensive Project Insurance policy**

### **Section 1a – Project works**

“ ...

#### **3. Additional Insurance Cover**

##### **3.1 Property belonging to or held in care custody or control of the insured**

3.1.1 The insurer shall indemnify the insured up to the sum insured specified in the schedule in respect of physical loss or damage to property other than the property insured belonging to or held in the care, custody or control of the insured which the insured could not reasonably have foreseen and which is caused by or arises out of the execution of the insured contract(s).

...”

**EPI 03**

**Existing Property Cover**

Endorsement No. ....

\_\_\_\_\_

It is hereby agreed that as of inception date of this Policy, the cover provided by Section 1 Material Damage is extended to apply to the undernoted Existing Property of the Employer:

.....  
.....

Sum Insured in respect of each and every accident: .....

Provided that:

- (A) the accidental physical loss of or accidental physical damage to such property arises as a direct result of the execution of the Contract by the Contractor(s) at the Construction Site;
- (B) the Insurers shall not be liable for:
  - (a) the cost of rectifying damage to the property, which existed prior to the commencement date of the cover;
  - (b) loss or damage by theft, or any attempt thereat, and by disappearance and shortage;
  - (c) loss or damage, which can be reasonably foreseen to be inevitable having regard to the nature of the Works to be executed, or the manner of its execution;
- (C) the Deductible(s) for Existing Property is (are) as follows:
  - (a) in respect of loss or damage due to or arising out of vibration, weakening or removal of supports, subsidence, collapse, cracking or fracturing:  
 ..... percent of the indemnity, subject to  
 a minimum of ....., each and every accident;
  - (b) in respect of loss or damage due to or arising out of any other cause:  
 ....., each and every accident.

In any action, suit or other proceeding where the Insurers allege that by reason of the provisions of (B)(a) and/or (B)(c) above any loss or damage is not covered hereunder, the burden of proving that such loss or damage is covered shall be upon the Insured.