

ENGINEERING INSURANCE

TRAINING

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Outline of Presentation

- ❑ Contractors & Erection All Risks Insurance overview
- ❑ Similarities and differences
- ❑ Policy scope of coverage
- ❑ Policy rating factors
- ❑ Policy memoranda
- ❑ Conclusion



CONTRACTORS ALL RISKS

&

ERECTION ALL RISKS INSURANCE

Contractors All Risks & Erection All Risks Insurance

- ❑ Contractors All Risks (CAR) and Erection All Risks (EAR) will be discussed together because of a number of similarities between them.
- ❑ Parties to CAR & EAR:-
 - **The Principal/Employer** - The owner of the project e.g. National Bank building in Blantyre: National Bank is the principal/employer.
 - **The Contractor** - responsible for carrying out the works i.e. Delta Construction Ltd and may even sub contract to others.
 - **The Engineer/Architect** - responsible for the design of the project.
 - **Suppliers of Materials**

Contractors All Risks Insurance

- ❑ Contractors All Risks Covers are not always guaranteed as they depend much on the performance of the economy.
- ❑ Contractors All Risks and Erection All Risks insurance are non-renewable covers (one-offs).

Contractors All Risks Insurance

- ❑ This is a genuine 'all risks' cover, it affords everything that is not excluded.
- ❑ Cover includes any unforeseeable loss or damage to insured objects and installations, i.e.:-
 - Permanent works
 - Temporary works and buildings, including contents therein
 - Contractors plant, tools and equipment
 - Employees' equipment and personal effects used in connection with the construction project;

Contractors All Risks Insurance

- ❑ CAR can be split into two:

Civil Engineering Works



Civil engineering works include : Roads, railroads, dams, bridges and pipelines.

Construction Engineering Works



Construction engineering works includes houses, office buildings and hospitals.

Contractors All Risks Insurance

- ❑ Premium rates for Construction Engineering Works on any CAR , as a rule of the thumb, are lower than those for Civil Engineering, reason being exposure is higher in the latter than the former.
- ❑ **General Exclusions** – war, invasion, civil war, commotion, strike, nuclear risks, gross negligence, willful acts/intents, wear & tear, deductible, halt/cessation.
- ❑ **Special Exclusions** –loss or damage to documents, sketches, drawings, money or cheques, faulty design, workmanship.

Erection All Risks Insurance



- ❑ The Erection All Risks policy is a comprehensive insurance, which provides complete protection against all types of risks associated with erection, testing, commissioning of machinery, plant and equipment during constructional stage.

Erection All Risks Insurance

- ❑ Erection All Risks Insurance embraces a wide variety of plant and machinery at all levels of complexity, ranging from the relatively straight forward positioning and connecting up of single manufactured items of equipment such as small pumps or electric motors to complete major industrial complex such as a large power station or manufacturing facility.

Duration

- ❑ The cover starts from the time of arrival of first consignment at site, normal storage and thereafter during erection, testing, commissioning until the plant is successfully commissioned and handed over.

Difference Between CAR & EAR Insurance

- CAR involves construction/building works and/or civil works.
- Defective material, bad workmanship is excluded
- Sum Insured is estimated value of completed works.

- EAR involves erection of machinery, equipment such as sub stations.
- Bad workmanship and faults in erection are covered
- Testing is covered
- Sum Insured is estimated value of completed works.

CAR & EAR Insurance

- ❑ Need for regular monitoring to keep abreast with contractual developments involving delays, extensions and increases in contract values together with their implications for additional cover/covers, additional premiums and warranties.
- ❑ Flood risk is high on CAR policies and need to be monitored and in this instance the location becomes very important.
- ❑ It is recommended that CAR and EAR be written on a project basis rather than as annual policies as renewal may take place while some projects are still taking place hence insurers have no full picture as to the loss ratios.

Terms that should have been the case:



Scope of Coverage

Contractors All Risks Insurance

- ❑ An all risks cover to provide financial protection for buildings and civil engineering projects, from the inception of the project, or offloading materials on site until final completion, or when the works are taken into use.
- ❑ Followed by a maintenance period as stipulated in the Contract Conditions.

Contractors All Risks Insurance

□ The Insured presents the risk to the Insurer

By submitting A written proposal
 A completed questionnaire
 Any other written information

And paying Insurers to accept the risk.

Contractors All Risks Insurance

- ❑ The insurer on receiving the premium undertakes to indemnify the insured should the risk trigger, subject to certain terms and conditions of the policy. (a policy is a legally binding contract).

- ❑ The policy incorporates:
 - General conditions applying to all sections
 - General exclusions applying to all sections

General Conditions

- Should be the same as for all other policies that the company issues.
- Compliance with the conditions are a precedent to indemnification.

General exclusions

- applies to all sections of the policy, always include:
 - the excess
 - nuclear clause
 - nuclear weapons material clause
 - war clause
 - Terrorism
 - asbestos

Policy Wording

- The policy comprises two sections:
 - Material Damage
 - Third Party Liability

Material Damage Section

☐ It covers:

any unforeseen and accidental physical loss or damage at the contract site necessitating repair or replacement, unless specifically excluded.

Third Party Liability Section

□ It covers legal liability for:

- accidental bodily illness or injury or death;
 - accidental loss or damage to property owned by third parties other than the contracting parties.
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- ✓ occurring in direct connection with the contract
 - ✓ happening on site, or in the immediate surrounding of the site
 - ✓ during the period of insurance.

Third Party Liability Section

- ❑ This is not meant to replace the Contractor's General Public Liability Policies. It is normally restricted to the project under hand.
- ❑ It can be taken as a Cross Liability Policy or Separate Insured Liability, as we have seen that the insured is being considered as one entity. i.e. Principal, Contractor, Engineer/Architect, Supplier etc. Each insured is taken as if he/she had a separate policy.

Specific Exclusion to Material Damage

- ❑ Loss or damage due to fault, defect, error, failure, or omission in design, plans or specification.
- ❑ Cost of repairing replacing, or rectifying insured property, which is defective in material and/or workmanship, but this exclusion shall be limited to the structure, or work directly affected and shall not extend to other work or property lost or damaged as a consequence of such defective material and/or workmanship.
- ❑ Normal making good, normal upkeep.
- ❑ Consequential loss, safety and/or loss of profits.

Specific Exclusion to Material Damage

- Loss or damage to files, drawing, accounts, bills, currencies, deeds, evidence of debt, notes, securities, or checks, packing material such as cases, boxes or crates.
- Loss by disappearance or shortage, discovered only at the time of taking an inventory.
- Wear and tear, corrosion, erosion, oxidation and deterioration due to lack of use and normal atmospheric conditions.

Material Damage Section

Period of insurance:

as per dates shown on the schedule

or

after off-loading on site or commencement of works, until take over or take into use of a part of the project.

Sum insured

estimated replacement value of the project at time of completion (usually the policy provides for declaration of the final contract price and adjustment of premium)

Indemnification

repair, replace, or reinstate to a condition as immediately before the loss.

before the event of partial loss – restore to total loss
actual replacement cost

Third Party Liability Section

❑ Specific Exclusions.

- Expenditure incurred in repairing, or replacing any work or property covered or coverable under Material Damage section of the policy.
- Liability arising out of use or damage to property or land or building caused by vibration or by the removal of weakening of support or injury to any person or property damage

occasional or resulting from such damage

Third Party Liability Section

Specific Exclusions.

- Liability arising out of bodily injury to or illness of employees or workmen of the Insured.
- Liability arising out of loss or damage to property belonging to or held in the care, custody or control of the contractor(s), the principal or any other firm, employee or workman of one of the aforesaid.
- Liability arising out of any accident caused by vehicle licensed for general road use or by water borne aircraft.
- Liability arising out of any contract or agreement.

Third Party Liability Section

Specific Exclusions cont.....

❑ Liability arising out of technical or professional advice given by the insured or by any other person acting on behalf of the insured

❑ **Sum Insured = Limit of Liability**

- Usually limited per event, and/or period of insurance.
- Should state if legal fees are included or in addition to the limit, if the latter, a separate limit should be shown.

Third Party Liability Section

□ Standard extensions usually applied:

- Expediting expenses
- Clearance of debris (Removal of debris)
- Extended maintenance
- Existing property/surrounding property
- Professional fees
- Faulty design
- Cross liability

□ Others for specific type of contract



Testing Erection All Risks

Testing Erection All Risks

- ❑ This consists of Cold Testing, Hot Testing, Commissioning, Commissioning Tests and Acceptance Test. For insurance purposes these are all testing periods. The testing period is the most dangerous period because the values of the works have almost reached the estimated contract works value, as such any loss or damage say due to explosion can mean total loss.
- ❑ Cold Testing - also called functional testing and involves the checking of parts and elements of the insured property by mechanical, electrical, hydrostatic or other forms of testing.

Testing EAR

- ❑ Hot Testing - operational and commissioning tests – involves the checking of parts under partial or full load. (input loading)
- ❑ Testing of second hand equipment is normally an exclusion on CAR and EAR policies.
- ❑ Commissioning - taking into operation; i.e. the operation of the insured property under production conditions for the purpose of attaining performance both in terms of quality and quantity, or specific requirements



Underwriting Factors

Underwriting Factors

- ❑ Nature of project, residential vs business area, multi storey to industrial and civil projects (roads, bridges, dams) etc - Risk is determined by the nature of the project. Offshore risks are very hazardous.
- ❑ Location and type of project. Some locations say deserts are susceptible to risks of flash floods.
- ❑ Overall site security - important to determine risk of theft or vandalism.
- ❑ How materials, equipment, plant and inputs are stored and their exposure to fire, flood etc.
- ❑ Time schedule - this will tell the underwriter when certain activities will be handled allowing you to assess the period of high and low exposures.

Underwriting Factors

- ❑ Contractors experience on similar projects, contracts bided for, contracts awarded, contracts successfully completed etc.
- ❑ Meteorological data, hydrological data, seismological data issues subsoil Conditions
- ❑ Sum Insured Values and the breakdown - Contract Works SI, Third Party Liability Limit, Surrounding Property SI, Removal of Debris, Professional Fees, Claims settlement costs.

Contract works SI can further be divided into sections like Civil Works, Erection Works, etc. These sums insured are important in assessing the highest valued section of the contract and in some cases this leads to the computation of the Estimated Maximum Loss (EML) or Probable Maximum Loss (PML).

Underwriting Factors

- ❑ Deductibles - one for major perils of fire, flooding, earthquake and minor excess for losses, say due to theft. (Excess for major losses and minor losses)
- ❑ Cedant's retention.
- ❑ Co-insurers and their respective shares
- ❑ Commissions and deductions
- ❑ Rates may range from 0.375% to 1.5% on Sum Insured depending on the Project and risk details obtained through the completed Questionnaire / proposal form.



Memoranda to Material Damage

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Basis of Indemnity

The basis of indemnity under material damage, is as follows:

- (i) **Repairable Damages** = cost of repairs necessary to restore the insured property to its condition, immediately before loss or damage, LESS value of salvage;
- (ii) **Total loss or destruction** = cost of reconstruction or replacement of the insured property, substantially the same as but not better or more extensive than lost or damaged LESS the value of any salvage.

Memoranda to Material Damage

Maintenance Period

The policy DOES NOT cover loss or damage to the works occurring or arising during the maintenance period, except when:

- Caused by the insured contractor, as the contractor carries out work in obligation to the maintenance clause of the contract.

Removal of Debris

The policy covers cost and expenses necessarily and reasonably incurred in the removal from the location of any accidental loss or damage.

Memoranda to Material Damage

Professional Fees

The policy indemnifies the insured in respect of architects, surveyors, consulting engineers and other professional fees necessarily and reasonably incurred in the repair, reconstruction or replacement of the insured property consequent to the accidental loss or damage.

Inland Transits

The policy indemnifies the insured in respect of accidental loss or damage to property whilst the property is being transported on any vehicle (including loading and unloading) to the site or temporary off-site storage facilities. (ocean and air transits are excluded)

Memoranda to Material Damage

Plans & Documents

Indemnity to insured plans and documents include:

- cost of labor and computer time spent in reproducing such property
- Cost incurred in producing the information

It does not cover distortion, erasure or non-availability of information.

Escalation

72 Hour Clause

Expediting Expenses

Additional cost over and above the standard cost in order to catch up with completion schedule.

Memoranda to Material Damage

Free Issue

Inflation Proofing

Reinstatement of Sum Insured.

Subjectivity: additional premium paid pro-rata to time and sum insured

Public Authorities.

The cost of reinstating a building following damage may be increased because of the necessity to comply with building or other regulations

Immobilised Plant Recovery

Continuing Fire Charge

With time excess of 24 hours. Cover often apply up to three months.

Conclusion

- ❑ Engineering projects take between three to fifteen years to be completed from the initial need to the end of the maintenance period and as it can be appreciated a lot of changes take place in this space of time therefore there is a lot of adjustments being made throughout the duration of the project to the initial concept.



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