WORDINGS FOR POWER PLANTS
Agenda

1. Introduction
2. Part I: Munich Re CMI Policy
3. Part II: Defects clauses
4. Discussions and Questions
WORDINGS FOR POWER PLANTS
Munich Re CMI policy and Defects clauses
C1
Part I: Munich Re CMI policy

Agenda

1. Overview of traditional operation policies
2. Structure, details and scope of Munich Re CMI policy
Part I: Munich Re CMI policy
Overview of Operation policies
Operation Policies
Overview

**MB – Machinery Breakdown**
Operation of machines, plants, installations

**EE – Electronic Equipment**
Operation of computers, mainframes, control centres, telephone switching stations, medical equipment

**CECR – Civil Engineering Completed Risks**
Operation of roads, tunnel, bridges, railways, ports, power structures (dams, flowgates, tunnels, pipelines)
Operation Policies
Overview

**MLoP – Loss of Profit Insurance**
(Business Interruption)

Loss of gross profit due to physical damage indemnifiable under operational power

**CMI – Comprehensive Machinery Insurance**

Operation of machines, plants, installation, facilities

Full protection against internal and external hazards
Operation Policies
Summary of perils
**Operation Policies**

**IAR vs CMI**

### IAR (incl BI/LOP)

All Risks are covered *which are not specifically excluded*. **Mech, elect breakdown excluded**

- **FLEXA** – Fire, Lightning, Explosion, Aircraft impact included
- **NatCat** – Earthquake, Flood, Inundation, Subsidence, Landslide, Avalanche, Hurricane, Cyclone, Volcanic Eruption or similar natural catastrophes included

**Mech. + Elect Breakdown** excluded MB endorsement required for adequate coverage

### CMI

- All Risks are covered *which are not specifically excluded*
- **FLEXA** – Fire, Lightning, Explosion, Aircraft impact included
- **NatCat** – Earthquake, Flood, Inundation, Subsidence, Landslide, Avalanche, Hurricane, Cyclone, Volcanic Eruption or similar natural catastrophes included
Operation Policies

Why CMI?

- Gaps in existing covers
- Developments in power investments multiple disciplines (elect, mech, comp, soft)
- Nature of claims and type of covers result in complex claims settlement
- Increasing size, complexity of plants.
- Policies require improvement to cope with the changing technologies and exposures
- Power plants are largely electrical & mechanical facilities. Fire policies (FLEXA or IAR) are not designed for occupancies where electrical & mechanical breakdown is key concern.

Power Policy Wordings

Thomas Kibet
Part I: Munich Re CMI policy
Comprehensive machinery insurance
Structure of the CMI policy

- Insuring agreement
  - Definitions applicable to all sections
  - Exclusions applicable to all sections
  - Conditions applicable to all sections

- Section 1
  - Operational material damage

- Section 2
  - Operational business interruption

- Policy schedules, Endorsements
Part I: Munich Re CMI policy
Section 1: Operational material Damage
CMI Policy Definitions

- Act of default
- Act(s) of God
- Actual value
- Additional insurance cover
- Consequential loss
- Deductible
- Insured
- Insured contract(s)
- Insurer
- Insurer's agent
- Insured party(ies)
- Insuring party
- Language of communication
- Material change in risk
- Malfunction

- New replacement value
- Period of insurance
- Policy of insurance
- Premises
- Premium
- Premium rate
- Property insured
- Proposal
- Representatives
- Schedule
- Section
- Site
- Sum(s) insured
- Terrorism
CMI Policy
General Exclusions

1. **No indemnification in respect of:**
   
   1.1 War, invasion, riot, strike, civil commotion
   
   1.2 acts of organized persons
   
   1.3 any act of terrorism
   
   1.4 ionizing radiation or radioactive contamination
   
   1.5 hazardous or contaminating properties
   
   1.6 atomic or nuclear fission
   
   1.7 act of default by the insured

2. **burden of proving that such loss or damage is covered shall be upon the insured.**1.1, 1.2 and 1.3
CMI Policy
Conditions applicable to all sections

1. Payment of premium
2. Reasonable precautions
3. Multiple insured clause
4. Act of default
5. Subrogation
6. Risk inspections
7. Material change in risk

8. Claims notification
9. Fraudulent claims
10. Disclaimer of liability
11. Other insurances
12. Entire agreement
13. Dispute resolution
14. Termination of policy
1.1. The insurer shall indemnify the insured for any sudden physical loss of or damage to the property insured which the insured could not reasonably have foreseen and which occurs at the premises at any time during the period of insurance due to any cause not specifically excluded and which results in property insured needing to be repaired or replaced.

1.2. The indemnity for each item specified in the schedule shall not exceed the amount set opposite thereto or any limit of indemnity that may be applicable.
2.1. The property insured under this section is all permanent and temporary installations, mechanical, electrical and electronic equipment, buildings incl contents, stock, goods in process,........

So, every plant working with the support of mechanical and electric equipment

Examples:

Power generation, Chemical industry, Cement industry, Paper and printing industry

Steel production, Metal working industry, Sugar plants, wood working industry, food industry, etc.
CMI - Section 1: Operational material damage
Sum Insured

Definition

The sum insured for each property has to be equal to the

**NEW REPLACEMENT VALUE**

of such property

The sum insured, less the deductible, is the **limit of indemnity**.
## CMI - Section 1: Operational material damage

### Sum Insured

<table>
<thead>
<tr>
<th>Purchase price +</th>
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<tbody>
<tr>
<td>▪ Transportation costs</td>
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<tr>
<td>▪ Insurance fees</td>
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<tr>
<td>▪ Customs duties</td>
</tr>
<tr>
<td>▪ Installation charges</td>
</tr>
<tr>
<td>▪ Other procurement costs</td>
</tr>
</tbody>
</table>
CMI - Section 1: Operational material damage
Additional insurance cover

- Capital additions
- Expediting expenses
- Fire-fighting expenses
- Hazardous substances
- Professional fees
- Removal of debris
- Temporary removal
CMI - Section 1: Operational material damage
Summary of section coverage

Flexa

NatCat

MB losses such as:

- Faulty design (calculations, plans, drawings and specifications)
- Faults at workshop or in erection
- Defects in casting and material
- Faulty operation, lack of skill, negligence
- Tearing apart on account of centrifugal forces
- Physical explosion, flue gas explosion in boilers
- Electrical causes such as short circuit, over current
Part I: Munich Re CMI policy

Section 2: Operational business interruption (BI)
CMI Section 2 – Operational business interruption (BI)
Indemnification

1.1. ...loss, unless specifically excluded... if at any time during the period of insurance the **property insured under the operational material damage section** suffers loss or damage **indemnifiable**....

1.2. The indemnity:

1.2.1. **gross profit**, or

1.2.2. **specified standing charges**,

.....resulting from a reduction in **turnover** including any **increased cost of working (ICOW)**.
CMI Section 2 – Operational business interruption (BI)
Sum insured: **Gross Profit or Standing charges**

<table>
<thead>
<tr>
<th>Net Profit</th>
<th>Standing Charges</th>
<th>Specified Working Expenses</th>
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<tbody>
<tr>
<td></td>
<td>(Fixed Costs)</td>
<td>(Variable Costs)</td>
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</table>

<table>
<thead>
<tr>
<th>Gross Profit</th>
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<tbody>
<tr>
<td>▪ Fixed taxes,</td>
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<tr>
<td>▪ Property tax</td>
</tr>
<tr>
<td>▪ Insurance cost</td>
</tr>
<tr>
<td>▪ Fixed charges for electricity, heating or gas</td>
</tr>
<tr>
<td>▪ Debt service (bank requirements)</td>
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<tr>
<td>▪ Wages and Salaries</td>
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<tr>
<td>▪ Etc.</td>
</tr>
</tbody>
</table>

Purchases of raw materials, freight, packing, etc.
CMI Section 2 – Operational business interruption (BI)
Definitions

- Annual turnover
- Debt service charges
- Gross profit
- Increased cost Working
- Monetary deductible
- Maximum indemnity Period
- Rate of gross profit
- Specified standing Charges
- Specified working Expenses
1300 Strike, riot and civil commotion
1301 Extra costs for airfreight
1302 Underground machinery and equipment
1303 Business interruption resulting from machinery breakdown during a guarantee period
1304 Earthquake
1305 Prolongation of the interruption period due to deterioration
1306 Maximum demand charges
1307 Additional expenditure other than increased cost of working
1308 Failure of public power, water, gas or steam supply
CMI Policy endorsements

1309 Delay in repair
1310 Suppliers’ extension
1311 Customers’ extension

**Special conditions**

1360 Serial losses
1361 Refractory materials and/or masonry in industrial furnaces and boilers
1362 Refrigerant and lubricating oil
1363 Conveyor belts and chains
1364 Wires and non-electric cables
1365 Rewinding of electric machines (e.g. motors, generators, transformers)
1366 Repairs to combustion engines (e.g. diesel, gas engines)
CMI Policy endorsements

**Special conditions**

1367 Components along the hot-gas path of gas turbines

1368 Waiver of underinsurance

1369 Submerged and deep-well pumps

1370 Overhauling of platen presses

1371 Overhauling of electric motors and generators above 1,000 kW (other than turbo-generators)

1372 Overhauling of steam, water and gas turbines and turbo-generator sets

1373 Inspection and overhauling of boilers

1374 Sum insured on unit-price basis

1375 Flue gas purification plants
Summary

- Comprehensive Machinery Insurance eliminate wording gaps and offer extended coverage which is flexible per client requirements.

- It is ideal suited for occupancies where machinery breakdown is a major risk i.e. power plants as they are high exposure risks due to inherent machinery hazards that may result into huge losses compounded by the concentration of values at one location.
Part II: Defects Clauses
Most policies cover ‘All Risks’ causing physical loss or damage that may materialise in the course of erection or construction projects.

Causes may originate from ‘inside’ the project but widespread damage to property may follow (‘defect’)

In general (limited) coverage for consequential loss or damage to property free of the defective condition is offered.

Standard clauses in the market define the coverage in detail.
Definitions
Defect - Damage

**DEFECT**
- A shortcoming, imperfection, or lack
- Defect is the expression for something that does not perform or do what it is intended to do.
- Not fit for Purpose, non-conformance with a specification

**DAMAGE**
- Physical change or alteration
- Due to some kind of occurrence
- Impairment of value or usefulness
Definitions
Loss – Physical loss

Loss

- A defect discovered in the supports of a building or bridge may render the entire complex unsafe to use. Although there is no physical alteration and hence no physical loss or damage to the structure, there is a financial loss as it cannot be used as originally intended. The coverage of physical loss excludes those pure financial losses.

vs.

Physical Loss

Faulty Design

- Errors in thinking or planning prior to the object actually being constructed or fabricated (not fit for its intended purpose).
Aspects to consider

- Defects seen as attributable to design, specifications, material or workmanship.
- Related to inadequate work of the designer, contractor or the manufacturer of equipment.
- Insurers historically didn’t provide cover.
- Insureds were left with a gap in coverage.
  - Defects can result severe property damage.

The standard defect exclusion clauses are the solution to such coverage gap.
- **Construction**

  Construction is characterized by the predominant part of components being made on site, which is typical for all civil projects. The contractor has a direct influence on design, material and workmanship.

  -> London Market Defect Exclusions (DE)

- **Erection**

  This is in strong contrast to erection works where a large portion of parts and items are manufactured off site. The works performed on site consist here in assembling the items with little influence on design, material or workmanship of the manufactured components.

  -> London Engineering Group (LEG)
Damage to compressor

- During assembly in the manufacture’s workshop (not located on site), the wrong type of bearing was installed. In the course of a test run on site, the bearing couldn’t withstand the stress, leading to a subsequent damage to the rotor and compressor casing.
LEG 1

LEG 1/96

Model “outright” Defects Exclusion

“The Insurer(s) shall not be liable for

- Loss or damage due to defects of material workmanship design plan or specification
Outright Defects Exclusion (LEG1)

- Outright defects exclusion
Outright Defects Exclusion (LEG1)

- Outright defects exclusion
"The Insurer(s) shall not be liable for all costs rendered necessary by defects of material workmanship design plan specification and should damage occur to any portion of the Insured Property containing any of the said defects the cost of replacement or rectification which is hereby excluded is that cost which would have been incurred if replacement or rectification of the Insured Property had been put in hand immediately prior to the said damage.

For the purpose of this policy and not merely this exclusion it is understood and agreed that any portion of the Insured Property shall not be regarded as damaged solely by virtue of the existence of any defect of material workmanship design plan or specification.
Consequence’s Defects Wording (LEG2)

• Defective part and ‘as if costs’ (enabling, access, disassembly and assembly)
Consequence's Defects Wording (LEG2)

- Defective part and ‘as if costs’ (enabling, access, disassembly and assembly)
LEG 3/96  
Model “Improvement” Defects Wording

“The Insurer(s) shall not be liable for

All costs rendered necessary by defects of material workmanship design plan specification and should damage occur to any portion of the Insured Property containing any of the said defects the cost of replacement or rectification which is hereby excluded is that cost incurred to improve the original material workmanship design plan or specification

For the purpose of this policy and not merely this exclusion it is understood and agreed that any portion of the Insured Property shall not be regarded as damaged solely by virtue of the existence of any defect of material workmanship design plan or specification
Improvement Defects Wording (LEG3)

- Improvement / betterment costs are excluded
Improvement Defects Wording (LEG3)

- Improvement / betterment costs are excluded
Munich Re EAR - Cover for Manufacturer's Risk

Base policy wording:

Insurers shall not be liable for
c. Loss or damage due to faulty design, defective material or casting, bad workmanship other than faults in erection
Munich Re CAR Policy (Special Exclusion to Section)

- Faulty design/defective material/bad workmanship: fully excluded
- Faults in erection: covered
Munich Re CAR Policy (Special Exclusion to Section)

- Faulty design/defective material/bad workmanship: fully excluded
- Faults in erection: covered
Endorsement:
c. all costs related to repair and/or replacement of parts and/or items directly affected by faulty design, defective material or casting, bad workmanship other than faults in erection, which the Insured would have incurred for rectifying the original fault had such fault been discovered before the loss occurred

This Endorsement does, however, not apply to parts and items of civil engineering sections.
Munich Re CAR Policy

The combination of MR EAR and MR endorsement 200 leads to coverage comparable to Leg 2/96

- Endorsement 200 contains the exclusion of civil parts or items while Leg 2/96 does not differentiate.
- “as if’ repair costs are excluded
Munich Re CAR Policy
The combination of MR EAR and MR endorsement 200 leads to coverage comparable to Leg 2/96

- Endorsement 200 contains the exclusion of civil parts or items while Leg 2/96 does not differentiate.
- “as if’ repair costs are excluded
### Cross Reference Table

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**Reference to defective "part"**

1. MR EAR: damage resulting from faulty workmanship during erection is **included**
2. Property which relies for its support or stability on property in defective condition is **excluded**
• In case of a loss, covering Defects may turn out to be costly and highly disputed

• The wide range of Defects Exclusions on the market may contain detrimental variations in scope of cover (and claims cost).

• Be conscious and prudent when covering Defects.

• Know your Defects Exclusion(s)! read carefully and word by word!

• Stick to proven concepts like MR, DE, LEG!
Thank you for your attention
Feedback Form - Wordings for Power Plants

Your feedback matters

Please visit: www.menti.com

Use the code: 35 55 24