Munich RE

WORDINGS FOR POWER PLANTS

Agenda

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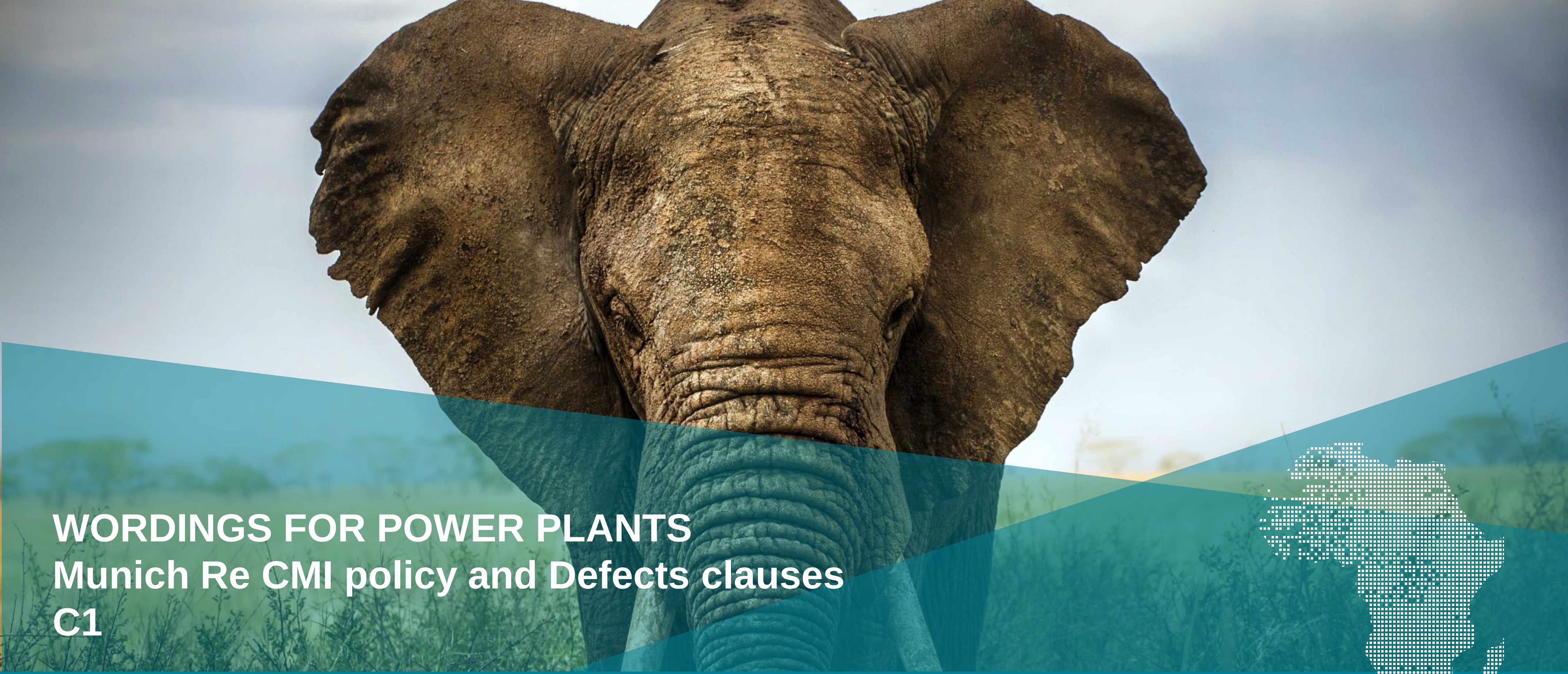
1. Introduction
2. Part I: Munich Re CMI Policy
3. Part II: Defects clauses
4. Discussions and Questions



WORDINGS FOR POWER PLANTS
Munich Re CMI policy and Defects clauses
C1

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Part I:
Munich Re CMI policy

September 2020
Thomas Kibet

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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

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Operation Policies
Overview

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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)

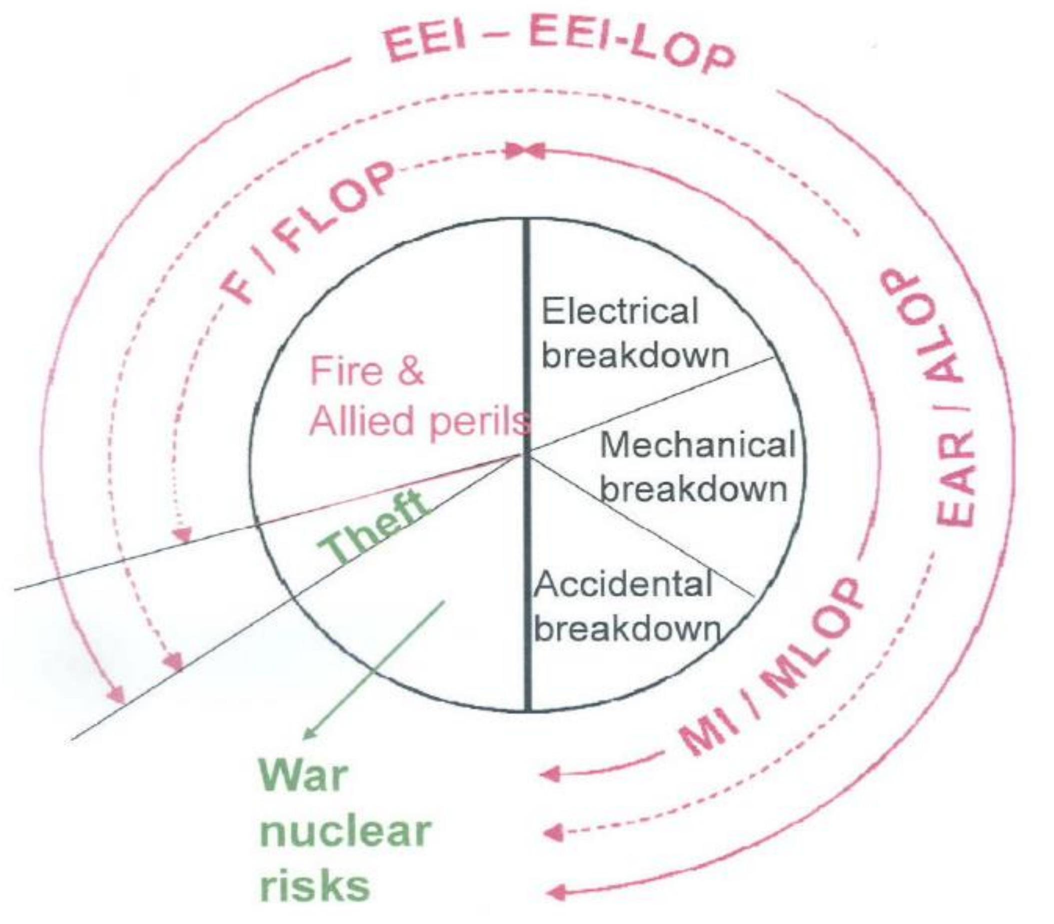
Loss of gross profit due to physical damage indemnifiable under operational power

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

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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?

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- Gaps in existing covers
- Developments in power investments multiple disciplines (elect,mech,comp,soft)

- Increasing size, complexity of plants.

- Power plants are largely electrical & mechanical facilities. Fire policies (FLEXA or IAR) are not designed for occupancies where electrical & mechanical breakdown is key concern.

- Nature of claims and type of covers result in complex claims settlement

- Policies require improvement to cope with the changing technologies and exposures

Part I: Munich Re CMI policy

Comprehensive machinery insurance

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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

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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

CMI - Section 1: Operational material damage
Indemnification

- 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.

CMI - Section 1: Operational material damage
Property insured examples

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

New Replacement Value Equivalent

Purchase price +

- Transportation costs
- Insurance fees
- Customs duties
- Installation charges
- Other procurement costs

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)

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CMI Section 2 – Operational business interruption(BI)

Indemnification

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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

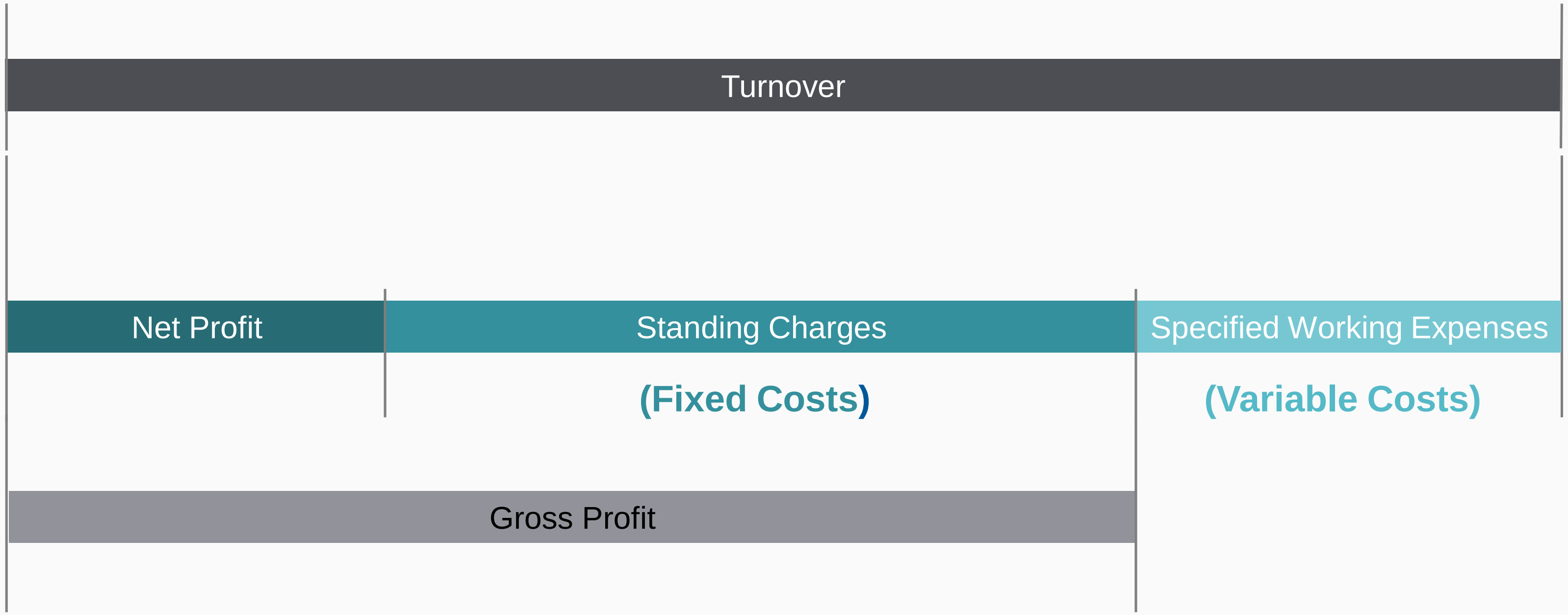
1.2.2. **specified standing charges,**

…..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



- Fixed taxes,
- Property tax
- Insurance cost
- Fixed charges for electricity, heating or gas
- Debt service (bank requirements)
- Wages and Salaries
- Etc.

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

CMI Policy

CMI Policy endorsements

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

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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

September 2020
Falko Schwaetter

Munich RE

Background

- 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

Image: Munich Re

DAMAGE

- physical change or alteration
- due to some kind of occurrence
- impairment of value or usefulness

Image: Munich Re / Myrzik / Jarisch

Loss – Physical loss

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Loss vs. Physical 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.

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 - Erection

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- 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

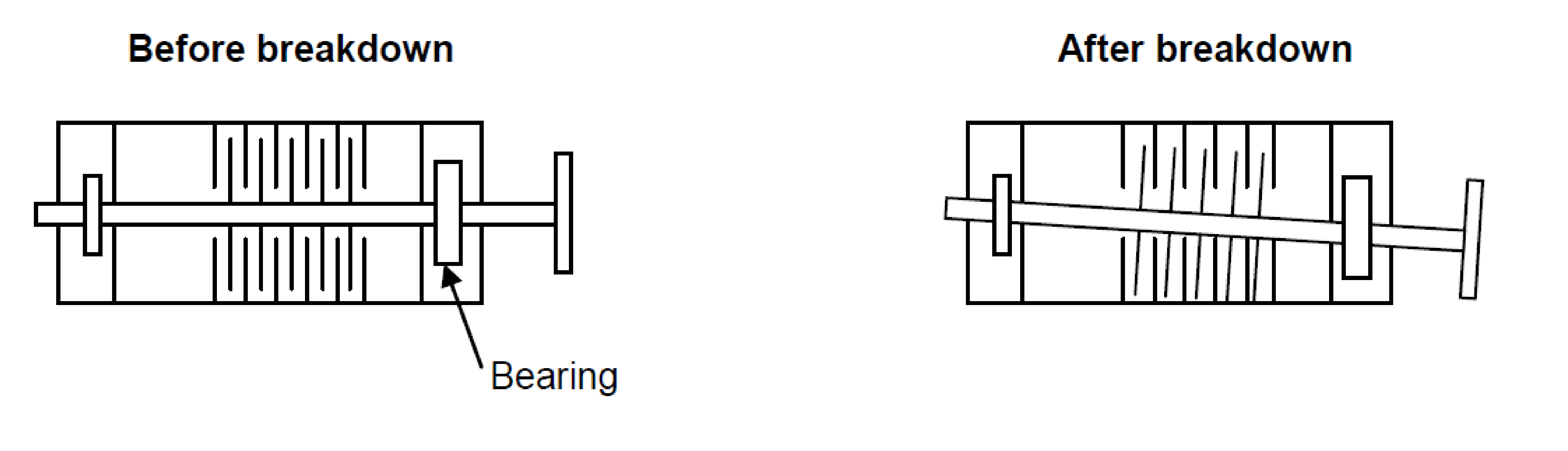
  This is in strong contrast to erection works where a large portion of parts and items are manufactured off site. The works performed on site consist here in assembling the items with little influence on design, material or workmanship of the manufactured components.

  -> London Engineering Group (LEG)

EAR - Erection Wordings
Case sample

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.



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LEG

London Engineering Group

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

LEG 1

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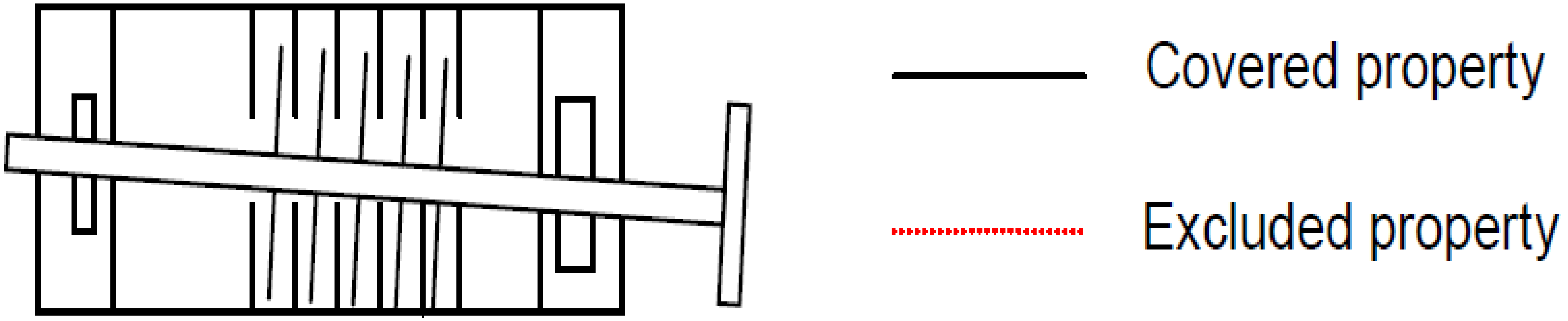
Outright Defects Exclusion (LEG1)

- Outright defects exclusion



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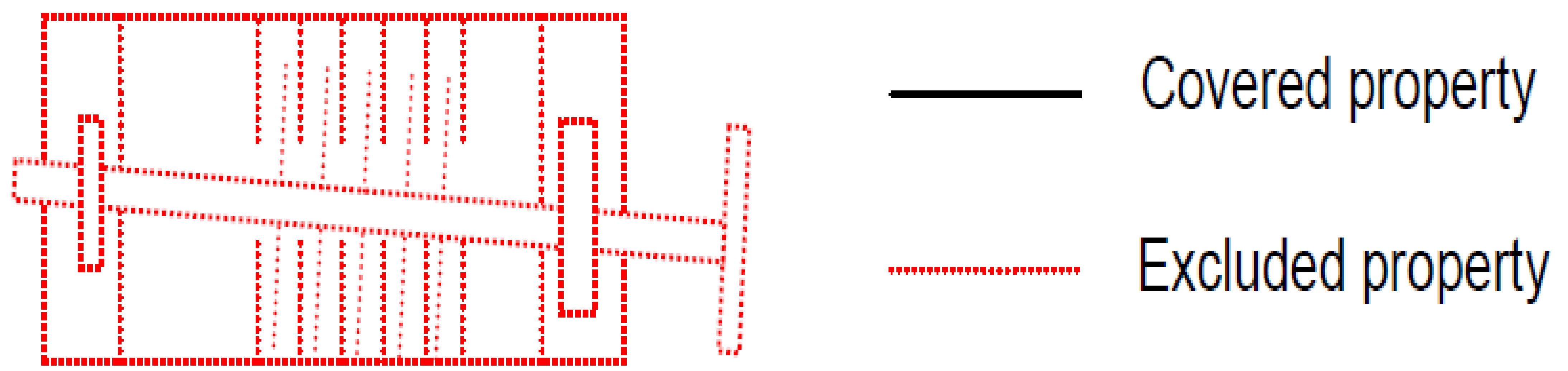
Outright Defects Exclusion (LEG1)

- Outright defects exclusion



EAR - Erection Wordings

LEG 2

LEG

London Engineering Group

LEG 2/96

Model “Consequences” 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 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

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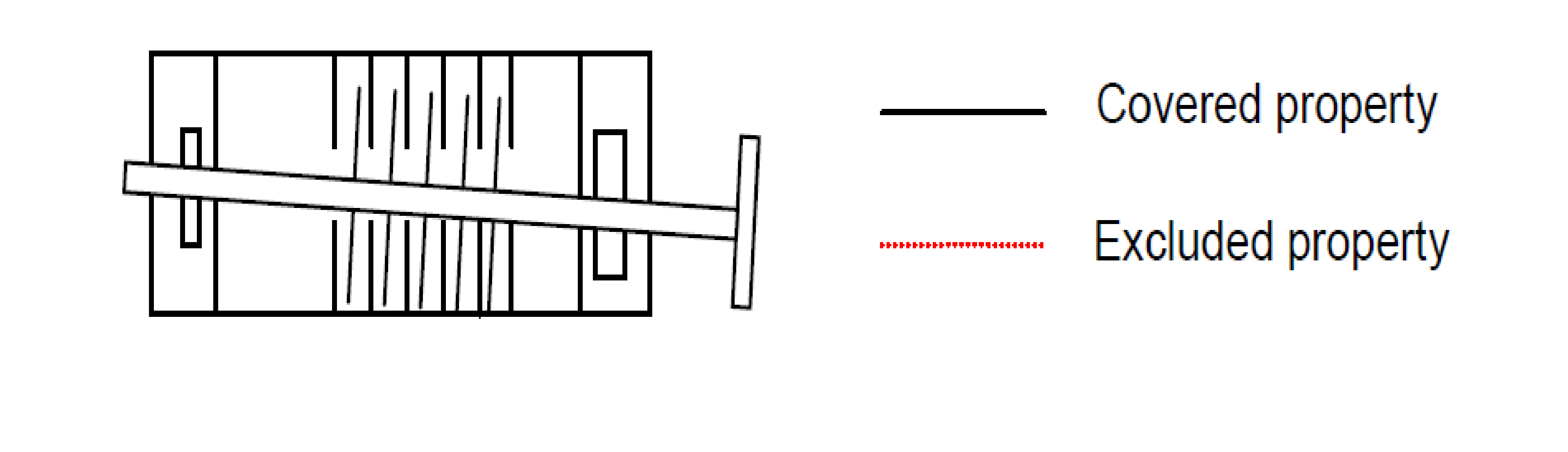
Consequence's Defects Wording (LEG2)

- Defective part and 'as if costs' (enabling, access, disassembly and assembly)



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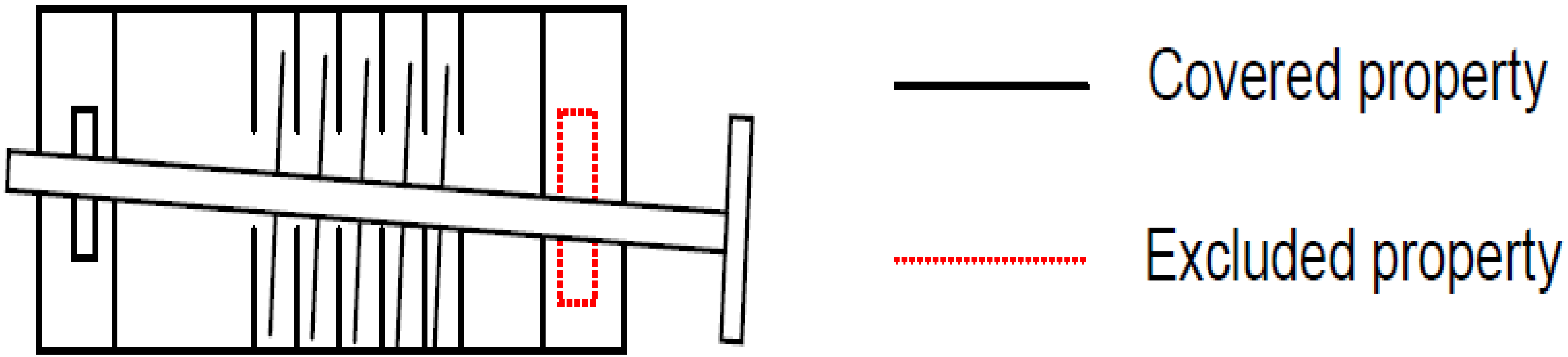
Consequence's Defects Wording (LEG2)

- Defective part and 'as if costs' (enabling, access, disassembly and assembly)



LEG

London Engineering Group

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

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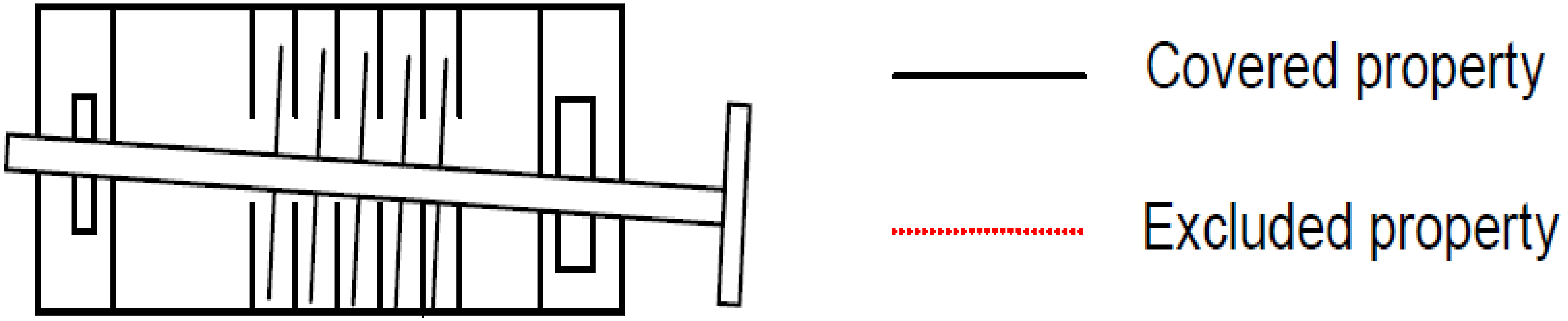
Improvement Defects Wording (LEG3)

- Improvement / betterment costs are excluded



EAR - Erection Wordings
LEG 3

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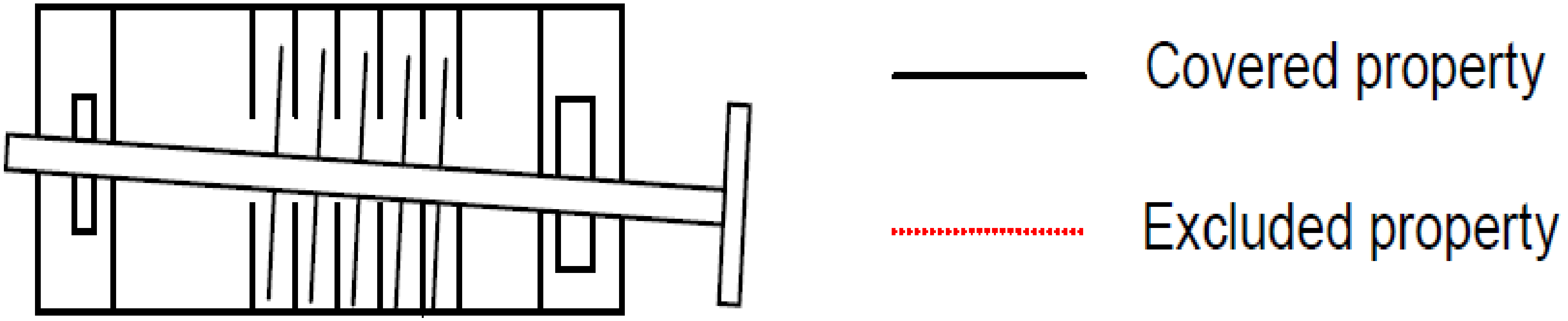
Improvement Defects Wording (LEG3)

- Improvement / betterment costs are excluded



EAR - Erection Wordings

MR END 200

MR

EAR

Erection All Risk

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

MR END 200

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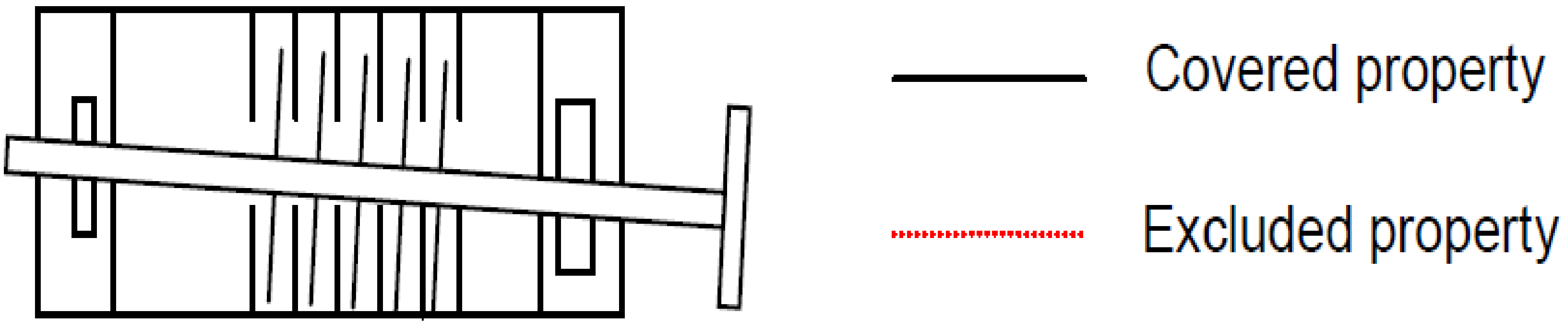
Munich Re CAR Policy (Special Exclusion to Section

- Faulty design/defective material/bad workmanship — fully excluded
- Faults in erection — covered



EAR - Erection Wordings

MR END 200

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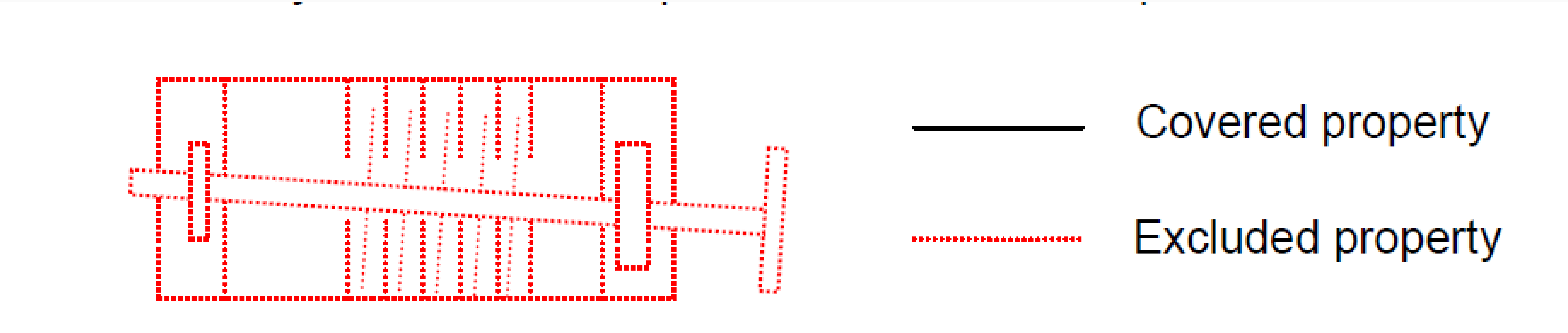
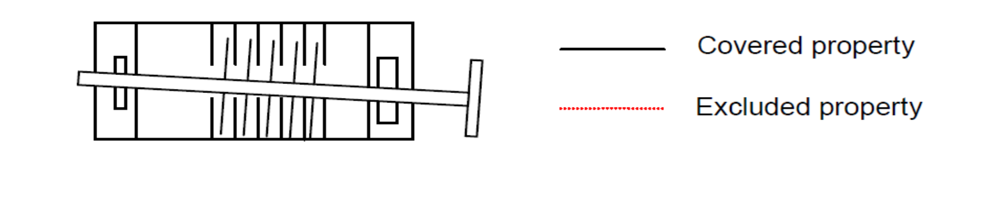




MR END 200

MR

EAR

Erection All Risk

Munich Re EAR

END 200 Cover for Manufacturer's Risk

Wording with 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.

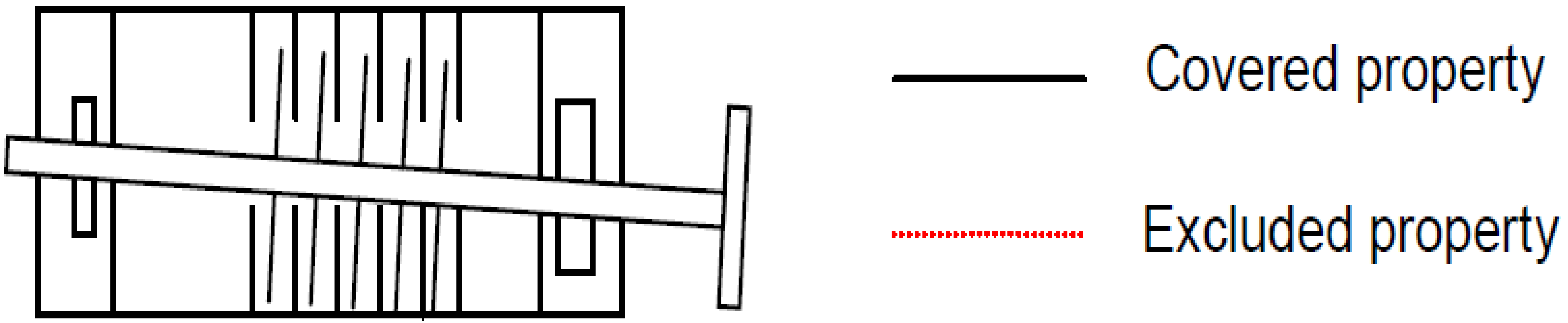
EAR - Erection Wordings

MR END 200

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



MR END 200

Munich RE

Munich Re CAR Policy

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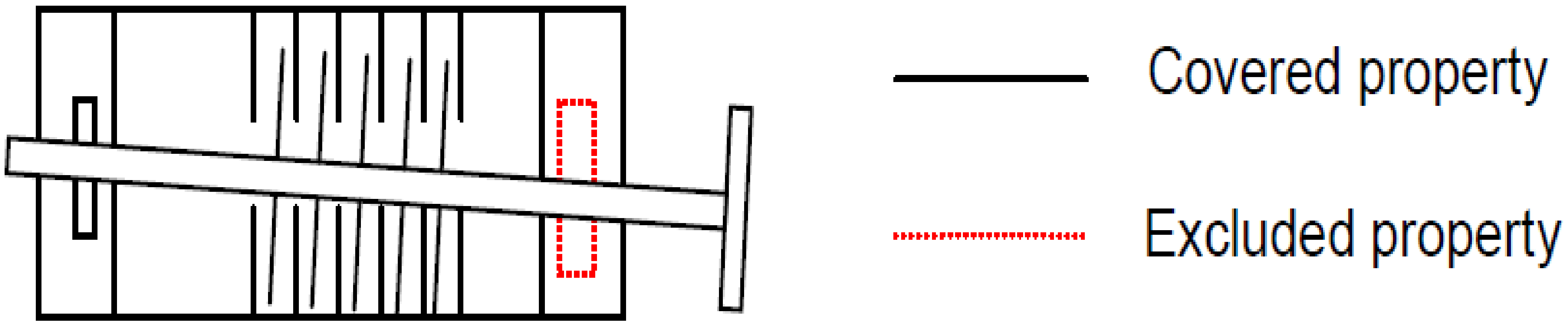

Cross Reference Table

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			CAR			Endt. 115	
		EAR			Endt. 200		
		Endt. 1239	Endt. 1240		CPI	Endt. 1241	Endt. 1249
		DE1		DE2	DE3	DE4	DE5
		LEG1/96			LEG2/96		LEG3/06
Design	Defective Part	excl	excl	excl	excl	excl	incl
	Resulting Damage	excl	excl	incl [2]	incl	incl	incl
Material	Defective Part	excl	excl	excl	excl	excl	incl
	Resulting Damage	excl	incl	incl [2]	incl	incl	incl
Workmanship	Defective Part	excl	excl	excl	excl	excl	incl
	Resulting Damage	excl [1]	incl	incl [2]	incl	incl	incl
Betterment		excl	excl	excl	excl	excl	excl

reference to defective "part"

[1] MR EAR: damage resulting from faulty workmanship during erection is <u>included</u>

[2] Property which relies for its support or stability on property in defective condition is <u>excluded</u>

Summary

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- 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

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Q & A Session

4

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Feedback Form - Wordings for Power Plants

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Your feedback matters

Mentimeter

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Use the code: 35 55 24