

DETAILS OF INTERESTING CLAIM

(From Experience with Integrated Gasification Combined Cycle Power Projects (IGCC) – IMIA Paper wgp20 (02)E)

No: DOIC22 (CAR)

Type of Insurance:

CAR

Description of damaged item:

Fire damage resulted after the refractory lining of one of the two gasifiers failed

Cause of Loss:

(5) Fire

Claim Cost

Description of Incident and Loss Prevention Measures initiated:

A fire damage resulted after the refractory lining of one of two gasifiers failed due to continuous impingement by the burner flames from a wrongly designed nozzle. The lining collapsed starting at the top end. Heat and pressure load onto the now unprotected steel vessel weakened the top flange and lifted it, leading to external fire of the insulation, wiring and piping. Both refractories (the damaged and the undamaged one) were replaced with a different special lining and burner nozzles were repeatedly reshaped before successful recommissioning.

An emergency shut down resulted in solidified asphalt in the piping on the way from the de-asphalting plant to the affected units.

Outline the interesting or unusual aspects of this claim or problems experienced during settlement:

The design of the lining in the nose brick area was not satisfactory and a check of the same area of the second gasifier revealed similar problems to the lining and a further fire loss was prevented. It may well be, that also technical problems of the burner contributed to the rapid damage to the lining as the burner was modified several times during commissioning. (It is not possible to calculate the correct form and length of the burner nozzle, during commissioning the best design has to be found by trial and error. In case of a burner nozzle being too long, damage is unavoidable, but temperature sensors may localize hot spots. These hot spots have been detected at ISAB and have been fought by cooling devices, which led to a more or less satisfactory solution).

CODES

1. Type of Insurance

M - Machinery Breakdown

BE - Boiler Explosion

LP (M) M - Loss of Profits

ALOP (DSU) - Advance Loss of Profits

EAR - Erection All Risks

CAR - Contractors All Risks (Civil)

G - Guarantee
EE - Electronic Equipment
O - Other Classes

2. Cause of Loss

- (1) Faulty operation
- (2) Faulty material or workmanship
- (3) Faulty design
- (4) Other internal causes
- (5) Fire
- (6) Explosion
- (7) Storm
- (8) Earthquake
- (9) Other external causes
- (10) Other causes or unknown