**DETAILS OF INTERESTING CLAIM**

No.:

DOIC 10

Type of Insurance:

M (Machinery Breakdown) and LP (M) M (Loss of Profits)

Description of Damaged item:

Sulphuric acid process at a phosphate processing facility.

Cause of Loss:

(4) Other Internal Causes and (10) Other Causes - Implosion

Claim Cost (100%):

(net of deductible or time excess)

$6.5 million US

Description of Incident and Loss Prevention Measures initiated:

A steam leak at a seal weld on a tube sheet of a waste heat recovery boiler allowed steam to enter the sulphuric acid process. Attempts to evacuate the steam resulted in implosion of the sulphuric acid tower and outlet duct.

The process systems recorded a temperature of approximately 800°F on gas leaving the waste heat recovery boiler, a drop of approximately 50° F from normal operating temperatures. The substantial drop suggested that water in the form of steam was entering the process system with the operator immediately shutting down the system including the boiler.

Due to continued loss of steam, the operator attempted to stem the flow by reducing boiler pressure that is normally maintained at 600 psi. During attempts to cool the boiler down, water levels could not be maintained and steam was found venting through the exhaust stack indicating that the steam had completely permeated the system. The presence of steam would weaken the acid concentration that in turn would cause extensive corrosion throughout. Attempts to purge the steam from the system included closing of dampers, depressurizing the boiler, opening vents and blowing dry air through the plant. Before the air blowers could be turned on however, it was necessary to cool the HRS acid tower via the acid circulating pumps. The HRS tower pump was first started then the final tower pump, when the top 20 feet of the HRS tower and 40 feet of the outlet duct collapsed.

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

The plant operators followed the manufacturers "shutting down" procedures contained within the operations manual provided with their system. Subsequent investigation determined that a similar implosion of a duct had been experienced some years earlier at a competing plant following which the manufacturer amended the operating manual to include shut down procedures in the event of a steam leak in order to prevent the potential for implosion - procedures that were not included with this Insured’s operating manual.

Attempts to effect recovery from the manufacturer failed - the presiding judge ruling that a waiver of subrogation clause contained within the original supply and construction contract for the sulphuric plant extended to all claims of negligence including the failure to warn of a known hazard.

**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 Risk (Civil)

   G Guarantee

   EE Electronic Equipment

   O Other Classes

1. 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