

## Arbitration

### Case Study

#### Introduction

A chemical company awarded a cost-reimbursable engineering, procurement, and construction (EPC) contract to a global joint venture firm created for executing a EPC contract. The contract, initially valued at \$160 million, was for two chemical plants and an offsite utility area. The joint venture then subcontracted the piping installation to a mechanical construction firm. The \$11 million mechanical piping subcontract was uniquely structured with an adjustable indirect compensation factor to be based on a percentage of scope growth.

After mobilization, the mechanical subcontractor experienced significant delays and scope growth and then accelerated its manpower to meet the completion date. However, mechanical completion was achieved three months late.

The mechanical subcontractor filed for arbitration claiming \$9 million in outstanding costs. The joint venture counterclaimed for \$3 million, which included liquidated damages assessed by the owner.

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#### Key Issues

The following issues framed the effort and set the priorities for development and implementation.

- During a critical point in the project, the joint venture placed the material and engineering on hold, which caused late and piecemeal delivery of the valves and pipe spools.
- To compensate the mechanical subcontractor for the manpower acceleration needed to mitigate these delays, the parties entered into a formal acceleration agreement for \$1 million.
- Certain events transpired that were not foreseeable or contemplated by the parties at the time of the acceleration agreement, which again delayed and disrupted progress.
- Uncontemplated events included incomplete and late engineering, late and excessive scope growth, and significant project mismanagement during the pipe testing.
- The mechanical subcontractor also had a large portion of unresolved change orders, thus affecting the reimbursement of the indirect compensation factor adjusted for scope growth.
- The joint venture also claimed damages, which included reimbursement of owner liquidated damages and a sharing of the project cost overruns.

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## **Role**

Our consultants' role was to independently determine the amounts for which the mechanical contractor and joint venture firm were entitled to receive, which included the following:

- Quantification of the outstanding change order values.
  - Calculation of the mechanical subcontractor's labor productivity losses due to factors such as scope growth, changed site conditions, and inadequate engineering.
  - Calculation of the indirect compensation factor for scope growth, as directed per the contract.
  - Assessment of the joint venture's delay claim validity and causation.
  - Determination of the alleged joint venture project cost overrun substantiation and possible reimbursement entitlement.
  - Determination of the validity of the joint venture's demand for refund of acceleration agreement.
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## **Deliverables**

The expert report identified key party liabilities with the associated quantified and substantiated damages. Through a detailed cost analysis and manpower productivity assessment, \$10 million in damages was substantiated as due the mechanical contractor. The various party actions were tied to key entitlement contract provisions and then systematically linked to the damages.

The report also methodologically addressed the joint venture expert's counterclaim damages. A delay diagram demonstrated, by the joint venture's own admissions, that the delays were due to other parties and weather events not attributable to the mechanical subcontractor. The remaining counterclaim damages were shown to not be substantiated or contractually based.

## **Results**

Of the \$10 million in damages that was supported by the expert report, the arbitrators awarded the mechanical contractor the majority of the direct damages. The EPC firm was not awarded any of its claimed damages.