

July, 2006

Contract Awarded USD 620 Million

– GS Caltex, HOU (Heavy Oil Upgrade) Plant –



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Project Outline

Yeosu, the project location, is a centralized site with plenty of group works from GS-Caltex and LG Petrochemical, so it maximizes synergy effect when carrying out the project. We are expected to strengthen our competitiveness in heavy oil upgrade facility construction through this project.

Project Summary	
Project Name	No.2 HOU Project
Client	GS Caltex
Location	Yeosu National Industrial Park, Yeosu, Cheonnam
Contract Type	1) Purchase / Outsourcing Construction: Cost+Fee 2) Engineering / Construction Management: Fixed Lump sum
Scope	Engineering, procurement & construction for process, utility and offsite areas
Contract Period	Dec., 2005 ~ March, 2008 (28 months)
Financing	Self-financing of client
Contract Amount	Approximately USD 623 million (KRW 593 bn)
Payment Condition	Cash

Project Scope		
Facility	Description	Scope
VDU	Vacuum Distillation Unit	150,000 BPSD
HCR	Hydrocracker	55,000 BPSD
LOP	Lube Oil Plant	17,000 BPSD
HMP	Hydrogen Production Facility	110 MMSCFD
SRU	Sulfur Recovery Unit	300 Ton/Day
Substation	Transformer Substation	154 kv
U & O	Utility & Offsite	Including Tank 41
Wharf facility	Wharf facility	10,000 DWT 1 Unit



Risk Management & Experiences

Based on the project know-how we have learned from RFCC of GS Caltex and Taiwan company, and BCC of S-Oil, we expect to enable efficient construction of the project. The payment and raw-material price cost risk and design cost increase will be hedged through the Cost+Fee contract.

Project Risk Analysis	
Performance	<ul style="list-style-type: none"> Many experiences in HOU projects including RFCC facility from GS Caltex and Taiwan company, and BCC from S-Oil. By utilizing the advantage of carrying out many GS Caltex related project, GS E&C will execute this project without problems.
Payment	<ul style="list-style-type: none"> No risk due to payment in cash
Material Cost and Foreign Exchange Risk	<ul style="list-style-type: none"> The impact of material cost increase will be hedged by Cost + Fee contract. No foreign exchange exposure risk
Etc.	<ul style="list-style-type: none"> Set contingency in client's project budget in order to cover unexpected risks.

GS Caltex Project Experience			
Project	Amount	Period	Scope
GS Caltex BTX	KRW 5.6 bn.	'88 ~ '90	E,Ps,Cs
GS Caltex PP	KRW 56.7 bn.	'90 ~ '92	E,P,C
GS Caltex BTX	KRW 42.8 bn.	'94 ~ '96	E,Ps,C
GS Caltex BTX	KRW 69.9 bn.	'01 ~ '03	E,Ps,C
Alkylation	KRW 59.0 bn.	'03 ~ '05	E,C
No.3 Reformate Splitter	KRW 24.3 bn.	'04 ~ now	E,Ps,C

HOU Project Experience			
GS Caltex RFCC	KRW 440.0 bn.	'92 ~ '95	E,P,C
S-Oil BCC	KRW 500.0 bn.	'92 ~ '96	E,Ps,Cm
RFCC, Taiwan	USD 170 mil.	'99 ~ '01	E,P,C



Process Outline

This facility firstly disposes the low-value added product, AR (Atmospheric Residue), which is produced through CDU process in refinery plant. Then, it produces high-value added products and manufactures lube oil additionally.

