

We Are Seeing a New Trend of Constructing Smaller “Modularized / Fast Track” 10,000 to 30,000 Barrel a Day Oil Refinery Projects Around the World.

Recently, we have been involved in a Capital Project (CAPEX) benchmark cost study for a Major Consulting firm. The following are some general benchmarks from that study & earlier studies.

#	ISBL Scope - Class 3 Estimate	\$ Cost	% Split
1	Major Equipment - Towers / Columns, Reactors, Fired Heaters, Heat Exchangers, Compressors, Drums & Pumps (165 Items)	93,435,000	31.5%
2	Modules / Pre-Assemblies - Skids	32,550,000	11.0%
3	Freight	3,842,000	1.3%
4	Equipment Setting	3,713,000	1.3%
5	Site Work	10,743,500	3.6%
6	Concrete Foundations	12,943,700	4.4%
7	Structural Steel	14,654,000	4.9%
8	Piping	45,885,000	15.5%
9	Electrical & Instrumentation	19,453,000	6.6%
10	Insulation / Painting	3,743,700	1.3%
11	Construction In Directs / General Conditions	23,665,000	8.0%
12	Engineering / Design & PM - HO Support	25,055,000	8.5%
13	Construction Management	4,253,000	1.4%
14	Start - Up & Spare Parts	1,587,000	0.5%
15	Other Minor Items	960,700	0.3%
16	Total ISBL Scope - Class 3 Estimate	296,483,600	100%
17	Cost per Barrel	11,859	

Production Rate 25,000 Barrels a Day / Modularized Oil Refinery - Located in North Africa:

- Producing Product Slate of Gasoline, Kerosene, Naphtha, Jet Fuel & Diesel Products
- Project Was 50% Stick Built & Included 135 Modules / Pre-Assemblies / Skids
- Modules Built in Turkey, Egypt & UAE
- EPC Project Duration 32 months - Cost Basis 2024



#	OSBL Offsite Scope - Class 3 Estimate	\$ Cost	% Split
1	Tank Farm 6 # Field Erected Oil Product Storage Tanks c/w Containment / Bund Walls & Loading Stations	4,830,000	32.3%
2	Boilers / Stream - Power Plant Addition	2,850,000	19.0%
3	(2) Pipeline 18 / 24" Oil / Water	1,430,000	9.6%
4	Pipe Tracks	600,450	4.0%
5	Other Utilities / Tie Ins	1,342,770	9.0%
6	WWT / Reservoir / MU Water	753,000	5.0%
7	Roads / Buildings - Warehouse	537,000	3.6%
8	Ship Loading Jetty Modifications	1,034,000	6.9%
9	Minor items	85,640	0.6%
10	Construction In-Directs / General Conditions	632,860	4.2%
11	Detailed Design / Construction Management	870,000	5.8%
12	Total OSBL	\$14,965,720	100.0%
13	Cost per Barrel	\$599	

A	Total ISBL & OSBL	\$311,449,320
B	Cost per Barrel	\$12,458
C	Cost Range Low - 20%	\$9,966
D	Cost Range High +20%	\$14,950

Researched & Published by John G. McConville CCP – Owner & Operations Director of Compass International.




COMPASS INTERNATIONAL
 +1 (609) 577-4505
compassinternational.net
sales@compassinternational.net



To review & purchase our (8) Cost Estimating Books, click on compassinternational.net/books/