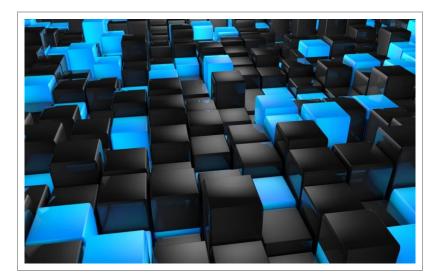
THE OIL & GAS GREATEST HITS FOR COST DATA IN YEAR 2014

# NoDoC 25365!

IN THE FIELD OF PROJECTS COST ESTIMATION

# **NEVER SEEN BEFORE!**

**651 Smart Assemblies! 252,000,000 Data on Cost:** 249,028,411 Material 2,995,689 Consumable 15,500 Equipment 8,600 Labor **Available only with CostOS V**  NODOC, OIL & GAS CAPEX AND OPEX COST ESTIMATION DATABASE



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# **EVANGEL FOR JULY 2015** LAUNCHING

# **800** SMART ASSEMBLIES

# 400,000,000

**DATA ON COST** 

## **UPSTREAM**

Item No.	Assembly Title	Item No.	Assembly Title
	ONSHORE		OFFSHORE
1	OIL / GAS EXPLORATION PACKAGE	1	OFFSHORE DRILLING RIGS
2	ONSHORE DRILLING RIGS	2	OFFSHORE DRILLING EQUIPMENT
3	ONSHORE DRILLING EQUIPMENT	3	OFFSHORE DRILLING TOOLS & ACCESSORIES
4	ONSHORE DRILLING TOOLS & ACCESSORIES	4	OFFSHORE DRILLING CHEMICALS
5	ONSHORE DRILLING CHEMICALS	5	OFFSHORE DRILLING SERVICES
6	ONSHORE DRILLING SERVICES	6	OFFSHORE DRILLING CASING
7	ONSHORE DRILLING CASING	7	OFFSHORE DRILLING TUBING
8	ONSHORE DRILLING TUBING	8	OFFSHORE WATER INJECTION
9	ONSHORE WATER INJECTION	9	OFFSHORE CHEMICAL METHODS FOR ENHANCED RECOVERY
10	ONSHORE CHEMICAL METHODS FOR ENHANCED RECOVERY	10	OFFSHORE GAS INJECTION
11	ONSHORE GAS INJECTION	11	OFFSHORE ESP FOR ENHANCED RECOVERY
12	ONSHORE ESP FOR ENHANCED RECOVERY	12	OFFSHORE PIPELAYING (EPCI)
		13	OFFSHORE CABLE LAYING (EPCI
	C LASS 28 JULY MAN	14	OFFSHORE VESSELS
		15	OFFSHORE JACKETS (FIXED)
		16	OFFSHORE WELLHAED DECKS
		17	OFFSHORE PRODUCTION DECKS
		18	OFFSHORE LIVING QUARTER
		19	ONSHORE FABRICATION OF JACKETS
		20	ONSHORE FABRICATION OF DECKS
	and the said	21	OFFSHORE BRIDGES
	and the second	22	OFFSHORE FLARE

Item No	Assembly Title	Item No	Assembly Title	Item No	Assembly Title
1	SEPARATORS	143	PIG LAUNCHER	285	DIAPHRAM, DUPLEX
2	RACTORS	144	PIG RECEIVER	286	DIAPHRAM, SIMPLEX
3	TOWERS	145	MANIFOLD, 2 WAY	287	GEAR, FUEL
4	HEATERS	146	MANIFOLD, 3 WAY	288	GEAR, CHEMICAL
5	BOILERS	147	MANIFOLD, 4 WAY	289	PISTON
6	STORAGE TANKS	148	MANIFOLD, 5 WAY	290	PROGRESSIVE CAVITY
7	PRESSURE VESSELS	149	MANIFOLD, 6 WAY	291	ROTARY, SLIDING VANE
8	INTEGRALLY GEARED COMPRESSOR	150	VACUUM VESSEL		COMPRESSORS
9	DRYER REGENERATION COMPRESSOR		CRYSTALLIZERS	293	AIR, CENTRIFUGAL
10	TURBO EXPANDER & CENTRIFUGAL COMPRESSOR	152	BATCH, ATMOSPHERIC	294	AIR, RECIPROCATING
11	PROPANE REFRIGERANT COMPRESSOR	153	BATCH, VACUUM	295	AIR, ROTARY SCREW
12	PROPANE VAPOR RECOVERY COMPRESSOR		REACTORS	296	AIR, SHOP
13	BUTANE VAPOR RECOVERY COMPRESSOR	155	AUTOCLAVE	297	CENTRIFUGAL
14	HORIZONTAL CENTRIFUGAL PUMPS	156	ELECTROWINNING CELL	298	CENTRIFUGAL- ROTARY
15	VERTICAL CENTRIFUGAL PUMPS	157	FERMENTER	299	CENTRIFUGAL- TURBINE
16	HEAVY DUTY CENTRIFUGAL PUMPS	158	INOCULUM TANK	300	CENTRIFUGAL- MOTOR

Item No	Assembly Title	Item No	Assembly Title	Item No	Assembly Title
17	HIGH SPEED CENTRIFUGAL PUMPS	159	JACKETED & AGITATED	301	RECIPROCATING
18	CENTRIFUGAL SULFUR PUMPS	160	JACKETED, NON- AGITATED	302	RECIPROCATING-GAS ENGINE
19	ROTARY LUBE AIR BLOWERS	161	KETTLE, JACKETED & AGITATED	303	RECIPROCATING- MOTOR
20	CENTRIFUGAL AIR BOWERS	162	MIXER/SETTLER	304	RECIPROCATING- STEAM
21	DEAERATOR	163	PROPELLER MIXER, FIXED	305	RECIPROCATING, THREE STAGE, WATER-COOLED
	HEAT EXCHANGERS	164	PROPELLER MIXER, PORTABLE	306	RECIPROCATING, TWO STAGE, WATER- COOLED
23	AIR COOLED, BARE TUBE AREA		BLOWERS	307	RECIPROCATING, SINGLE STAGE, WATER-COOLED
24	CONDENSER, VERTICAL TUBE, SMALL	166	AXIAL	308	RECIPROCATING, TWO STAGE, AIR- COOLED
25	MULTIJET SPRAY- TYPE CONDENSER	167	CENTRIFUGAL	309	ROTARY, SINGLE STAGE, SLIDING VANE
26	MULTIJET BAROMETRIC CONDENSER	168	ROTARY	310	ROTARY, SINGLE STAGE, HELICAL SCREW
27	DOUBLE PIPE	169	ROTARY, 2 ROTOR	311	ROTARY, SINGLE STAGE, STRAIGHT LOBE
28	VAPORIZER, JACKETED VESSEL	170	ROTARY, SLIDING VANE	312	ROTARY SCREW
29	VAPORIZER, JACKETED VESSEL WITH INTERNAL COIL	171	ROTARY, TURBO	313	TURBO-EXPAND.

Item No	Assembly Title	Item No	Assembly Title	Item No	Assembly Title
30	EVAPORATOR, AGITATED FILM	172	TURBO		CENTRIFUGES
31	EVAPORATOR, FALLING FILM	173	CENTRIFUGAL	315	CENTRIFUGAL SEPARATOR, BOTTOM DRIVEN
32	EVAPORATOR, FORCED CIRCULATION	174	HEAVY-DUTY	316	CENTRIFUGAL SEPARATOR, HORIZONTAL, AUTO. BATCH
33	EVAPORATOR, HORIZONTAL TUBE		FANS	317	CENTRIFUGAL SEPARATOR, TOP SUSPENDED
34	EVAPORATOR, VERTICAL TUBE	176	VANE-AXIAL	318	CENTRIFUGAL SEPARATOR, VERTICAL, AUTO. BATCH
35	KETTLE REBOILER	177	TUBE-AXIAL	319	OSCILLATING SCREEN
36	REBOILER	178	CENTRIFUGAL, BACKWARD CURVED	320	RECIPROCATING CONVEYOR
37	SHELL/TUBE, FIXED/U	179	CENTRIFUGAL, RADIAL, TO 22 IN H2O	321	SEDIMENTATIONN, SCROLL CONVEYOR
38	SHELL/TUBE, FLOATING HEAD	180	CENTRIFUGAL, RADIAL, TO 32 IN H2O	322	SOLID BOWL W/O MOTOR
39	FIXED-TUBE-SHEET		SIZE REDUCTIONS	323	DISC-NOZZLE CENTRIFUGE
40	FINNED- TUBE,FLOATING- HEAD	182	BALL MILL	324	SHARPLES SUPER D CENTRIFUGE
41	GASKETED PLATE EXCHANGER	183	VIBRATING BALL MILL	325	ATM SUSPENDED BASKET CENTRIFUGE

Item No	Assembly Title	Item No	Assembly Title	Item No	Assembly Title
42	WELDED PLATE EXCHANGER	184	BALL MILL DRY GRINDING, CLOSED CIRCUIT WITH AIR CLASSIFIERS	326	SCREEN BOWL
43	SPIRAL PLATE	185	BALL MILL DRY GRINDING, OPEN CIRCUIT	327	PUSHER TYPE
44	FLAT PLATE	186	BALL MILL WET GRINDING, CLOSED CIRCUIT WITH AIR CLASSIFIERS		CLASSIFIERS
45	SCRAPED WALL	187	BALL MILL WET GRINDING, OPEN CIRCUIT	329	CYCLONE, TURBO SCREEN
46	SPIRAL TUBE	188	AG/SAG MILL DRY GRINDING, CLOSED CIRCUIT WITH AIR CLASSIFIERS	330	JIG, DUPLEX
47	TANK HEATER	189	AG/SAG MILL DRY GRINDING, OPEN CIRCUIT	331	RAKE
48	WATER HEATER	190	AG/SAG MILL WET GRINDING, CLOSED CIRCUIT WITH AIR CLASSIFIERS	332	SPIRAL, DUPLEX
49	BAYONET HEATER	191	AG/SAG MILL WET GRINDING, OPEN CIRCUIT	333	SPIRAL, SIMPLEX
50	ELECTRIC IMMERSION HEATER	192	CAGE MILL		DRYERS
51	DIRECT FIRE HEATER, CYLINDRICAL TYPE WITH VERTICAL TUBES	193	CONE CRUSHER	335	AGITATED, HOLLOW- FLIGHT

Item No	Assembly Title	Item No	Assembly Title	Item No	Assembly Title
	COOLING AND REFRIGERAIONS	194	GYRATORY CRUSHER	336	DRUM, DOUBLE, ATMOSPHERIC
53	AIR CONDITIONER PACKAGE	195	JAW CRUSHER	337	DRUM, DOUBLE, VACUUM
54	COOLING POND	196	IMPACT CRUSHER	338	DRUM, ROTO- LOUVER W/ FAN
55	COOLING TOWER, FORCED DRAFT	197	ROLL CRUSHER	339	VACUUM SHELF
56	COOLING TOWER, INDUCED DRAFT	198	PEBBLE MILL	340	DRUM, SINGLE, ATMOSPHERIC
57	REFRIGERATION	199	ROD MILL	341	DRUM, SINGLE, VACUUM
	SEPARATORS	200	PULVERIZER	342	ROTARY, DIRECT GAS FIRED
59	AIR SWEEP, DRY W/O MOTOR	201	ROLLING GRINDER	343	ROTARY, INDIRECT GAS FIRED
60	CYCLONE, WET, CERAMIC LINED	202	ROTARY CUTTER	344	ROTARY, HOT AIR
61	CYCLONE, WET, URETHANE LINED	203	CAGE-TYPE DISINTEGRATOR	345	ROTARY, VACUUM
62	CYCLONE, WET, RUBBER LINED CI		DUST COLLECTORS	346	TRAY, ATMOSPHERIC
63	CYCLONE, WET, RIBBER LINED FRP	205	BAGHOUSE	347	TRAY, VACUUM
64	CYCLONE, WET, NIHARD LINED, LARGE	206	CENTRIFUGAL SCRUBBER	348	PAN DRYER
65	GAS/LIQUID, VANE TYPE	207	CYCLONE	349	PACKAGED VACUUM TUMBLE
66	SCREW CLASSIFIER, 1- SCREW	208	ELECTROSTATIC PRECIPITATOR	350	VACUUM TUMBLE
67	SCREW CLASSIFIER, 2- SCREW	209	GRAVITY SPRAY SCRUBBER	351	DYNA-CONE VACUUM

Item No	Assembly Title	Item No	Assembly Title	Item No	Assembly Title
68	TRAY COLUMN, BUBBLE-CAP TRAY	210	IMPINGEMENT SCRUBBER, WET	352	SPRAY DRYER, PACKAGE
69	TRAY COLUMN, VALVE TRAY	211	SCRUBBER, WET	353	SPRAY DRYER
70	TRAY COLUMN, SIEVE TRAY	212	VENTURI		VACUUM PUMPS
71	TRAY COLUMN, STAMPED TURBOGRID TRAY	213	WET DYNAMIC SCRUBBER	355	BLOWER, 1-STAGE DRY SEAL
72	DISTILLATION COLUMN,BUBBLE- PLATE TOWER	214	DRY DYNAMIC SCRUBBER	356	BLOWER, 1-STAGE LIQUID SEAL
73	DISTILLATION COLUMN,SIEVE-TRAY TOWER	215	LOUVER COLLECTOR	357	BLOWER, 2-STAGE LIQUID SEAL
74	DISTILLATION COLUMN,TURBOGRID TRAY TOWER	216	MULTIPLE CYCLONE		SCREENS
75	PACKED COLUMN	217	FABRIC FILTER DUST COLLECTOR	359	DSM
	AGGLOMERATORS	218	SUBMERGED NOZZLE SCRUBBER	360	GRIZZLY, VIBRATING
77	DISK WITH MOTOR		FILTERS	361	ROTARY TROMMEL
78	CONE LARGE	220	BELT	362	STATIONARY
79	CONE SMALL	221	CARTRIDGE	363	VIBRATORY, 1-DECK
80	DRUM WITH MOTOR	222	DISC	364	VIBRATORY, 2-DECK
81	CENTRIFUGAL	223	DRUM	365	VIBRATORY, 3-DECK
82	FLY ASH	224	GRAVITY		EJECTORS
	AGITATOR	225	LEAF	367	EDUCTOR MIXER
84	IMPELLER, ANCHOR, TOP ENTERING	226	PAN	368	EJECTOR
85	PROPELLER, SIDE ENTERING	227	PLATE AND FRAME	369	STATIC MIXER, JACKETED

Item No	Assembly Title	Item No	Assembly Title	Item No	Assembly Title
86	PROPELLER, TOP ENTERING	228	TABLE	370	STATIC MIXER, NON- JACKETED
87	PROPELLER, CLOSED TANK	229	TUBE, ABOVE 1500 PSI	371	STEAM-JET, FOUR STAGE WITH TWO BAROMETRIC CONDENSER
88	PROPELLER, OPEN TANK	230	CENTRIFUGAL FILTE, CONTINUOUS SOLID BOWL	372	STEAM-JET, TWO STAGE, NONCONDENSING
89	TURBINE, BATCH REACTOR	231	SAND FILTER	373	STEAM-JET, ONE- STAGE, NONCONDENSING
90	TURBINE <i>,</i> FERMENTATION	232	CHARCOAL FILTER		CENTRIFUGAL PUMPS
91	TURBINE, SINGLE IMPELLER		BINS	375	HORIZONTAL, 1- STAGE, HORIZ. SPLIT CASE
92	TURBINE, DUAL IMPELLER	234	CONE BOTTOM	376	HORIZONTAL, 1- STAGE, VERT. SPLIT CASE
93	TURBINE, TOP ENTERING	235	HOPPER WITH BOTTOM, BOLTED	377	HORIZONTAL, 4- STAGE, HORIZ. SPLIT CASE
	PUMPS		MATERIAL HANDLING EQUIPMENT	378	HORIZONTAL, 8- STAGE, HORI
95	CENTRIFUGAL PUMP	237	BIN ACTIVATOR, VIBRATING	379	HORIZONTAL, ANSI, 1-STAGE
96	RECIPROCATING PUMPS	238	FEEDER, ROTARY TABLE	380	HORIZONTAL, API- 610, 1-STAGE
97	VACUUM PUMPS	239	RAIL CAR DUMPER	381	HORIZONTAL, SEWAGE/TRASH

Item No	Assembly Title	Item No	Assembly Title	Item No	Assembly Title
98	ROTARY,GEAR PUMPS	240	ROTARY AIR LOCK	382	HORIZONTAL, UTILITY, THREADED W/ MOTOR
99	VERTICAL PUMPS	241	SLIDE GATE	383	INLINE, 1-STAGE W/ MOTOR
100	SUMP & WELL PUMPS	242	CHUTE	384	INLINE, UTILITY W/ MOTOR
101	SLURRY PUMPS		BLENDERS	385	VERTICAL, SEWAGE/TRASH, 1- STAGE
	STORAGE TANKS	244	KNEADER, STATIONARY, DOUBLE ARM	386	VERTICAL, SUMP, 1- STAGE
103	API, CONE ROOF, FIELD FAB	245	KNEADER, TILTING, DOUBLE ARM	387	VERTICAL TURBINE, 1-STAGE
104	API, CONE ROOF, SHOP FAB	246	KNEADER, TILTING, VACUUM, DOUBLE ARM	388	VERTICAL TURBINE, 4-STAGE
105	API, FLOATING ROOF	247	RIBBON	389	VERTICAL TURBINE, 8-STAGE
106	HORIZ, FUEL STORAGE	248	SPIRAL RIBBON	390	AVS-CHEMICAL HORIZONTAL DUCTILE IRON CASING
107	HORIZ, ROUND ENDS	249	ROTARY, DOUBLE CONE	391	CHEMICAL IN-LINE DUCTILE IRON CASING, VERTICAL MOTOR
108	VERT, CONE ROOF, FLAT BOT, FIELD FAB	250	ROTARY, TWIN SHELL	392	IN-LINE VERTICAL MOTOR
109	VERT, CONE TOP & BOTTOM, SMALL	251	SIGMA, DOUBLE ARM		GAS SCRUBBERS
110	VERT, SHOP FAB	252	TWO-ROLL	394	IMPINGEMENT, 1- STAGE

Item No	Assembly Title	Item No	Assembly Title	Item No	Assembly Title
111	FIELD-ERECTED	253	MULLER	395	IMPINGEMENT, 2- STAGE
112	BULLET TANK	254	PUG MILL EXTRUDER	396	IMPINGEMENT, 3- STAGE
113	SETTLE TANK	255	ROLL-TYPE EXTRUDER	397	VENTURI
114	OFF SPEC TANK	256	SCREW EXTRUDER	398	VENTURI, 2-STAGE
	CONVEYORS	257	SCREW PRESS	399	WET CENTRIFUGAL
116	APORN		BOILERS	400	WET DYNAMIC
117	BELT, CLOSED W/ WALKWAY, LONG	259	OIL/GAS FIRED, PACKAGE		ELECTRIC MOTORS
118	BELT, CLOSED W/ WALKWAY, SHORT	260	OIL/GAS FIRED, FIELD FAB	402	SQUIRREL-CAGE
119	BELT, OPEN, LONG	261	PUL. COAL FIRED, FIELD FAB	403	EXPLOSION-PROOF
120	BELT, OPEN, SHORT	262	STOKER COAL FIRED, FIELD FAB	404	ENCLOSED, FAN- COOLED
121	BELT, OVERLAND, INSTALLED		FIRED HEATERS	405	OPEN, DRIP-PROOF
122	PNEUMATIC	264	BOX		TURBINE AND EXPANDERS
123	ROLLER	265	CYLINDERICAL	407	AXIAL GAS TURBINE
124	SCREW	266	DOWTHERM	408	RADIAL EXPANDER
125	VIBRATING	267	PORTABLE	409	STEAM TURBINE
	VESSELS	268	SOLUTION HEATER		DRIVERS
127	COLUMN, NO INTERNALS	269	TANK HEATER	411	GAS TURBONE DRIVER
128	HORIZONTAL, NO INTERNALS		ELEVATORS	412	STEAM TURBINE DRIVER
129	VERTICAL	271	BUCKET	413	INTERNAL COMBUSTION ENGINE

Item No	Assembly Title	Item No	Assembly Title	Item No	Assembly Title
130	SPHERE	272	DRUM	414	VARIABLE SPEED DRIVE
131	STABILIZER COLUMN	273	FREIGHT		HOISTING EQUIPMENT
132	K.O DRUM		INCINERATORS	416	ELECTRIC HOIST
133	AIR RECEIVER	275	CATALYTIC	417	HAND HOIST
134	CLOSED DRAIN VESSEL	276	CYLINDRICAL		PIGS
135	STILL COLUMN	277	DIRECT FLAME	419	INTELIGENT PIG
136	PACKED COLUMN	278	HEARTH	420	<b>REGULAR PIG</b>
137	STRIPPING COLUMN	279	MULTIHEARTH		GENERATORS
138	SURGE DRUM	280	ROTARY KILN	422	ELECTRICAL GENERATOR
139	FLASH DRUM	281	STACK	423	GAS TURBINE GENERATOR
140	SUMP DRUM		POSITIVE DISPLACEMENT PUMPS	424	DIESEL GENERATOR
141	SUCTION DRUM	283	CHEMICAL INJECTION, FIXED SPEED	425	STEAM TURBINE GENERATOR
142	SETTLE VESSEL	284	CHEMICAL INJECTION, VARIABLE SPEED	426	PORTABLE GENERATOR

## ELECTRICAL

Item No	Assembly Title	Item No	Assembly Title
1	TRANSFORMERS	29	CABLE TIE
2	ELECTRIC GENERATORS	30	SADDLE FOR HDG CONDUITS
3	ELECTRIC MOTORS	31	GLAND
4	ELECTRIC MCV	32	RTU CONEX
5	ELECTRICAL ACCESSORIES	33	SOLAR CELL PANEL
6	SWITCH GEAR	34	BATTERY SET
7	LIGHTING PANEL	35	BATTERY CHARGER
8	INDOOR PANEL	36	NER
9	RELAY PANEL	37	DC CHARGER
10	DISTRUBUTION PANEL	38	BATTERY RACK
11	TRACING PANEL	39	DIESEL GENERATORS
12	AIR CRAFT WARNING LIGHT PANEL	40	BARE COPPER CONDUCTOR
13	BUSDUCT	41	TINNED COPPER EARTHING LUG
14	TRANSFORMER	42	EARTHING ROD
15	AC UPS	43	POWDER FOR EXOTHERMIC WELD
16	LIGHTING POLE	44	EARTING CONNECTOR, COMPRESSION TYPE, COPPER ALLOY,
17	LIGHTING FIXTURE	45	WELDING MOULD, "TEE" WELDING MOULD, CABLE TO CABLE
18	EXIT SIGN	46	COPPER AIR TERMINAL ROD FOR CORROSIVE ATMOSPHERE
19	SINGLE POLE SWITCH 250V	47	CROSS CLAMP FOR CONNECTOR TAPE
20	PUSH BUTTON	48	TEST JOINT
21	POWER OUTLET	49	BARE COPPER STRIP
22	JUCTION BOX	50	SPARK GAP
23	CABLE	51	RED WIRE, PVC, 1X2.5
24	LOCAL CONTROL STATION	52	BLUE WIRE, PVC, 1X2.5
25	CABLE LADDER STRAIGHT	53	GREEN/YELLOW, PVC, 1X2.5
26	CABLE LADDER HORIZONTAL	54	PDCS PANEL

## ELECTRICAL

Item No	Assembly Title	Item No	Assembly Title	
27	CABLE TRAY	55 CATHODIC	C PROTECTION	
28	CONDUIT			

#### **INSTRUMENT**

ltem No.	Assembly Title	Item No.	Assembly Title
	FLOW INSTRUMENTS	30	LEVEL TRANSMITTER
1	ORIFICE PLATES	31	LEVEL SWITCH
2	VENTURI TUBES	32	LEVEL TRANSMITTERS
3	RESTRICTION ORIFICE PLATES		PRESSURE INSTRUMENTS
4	POSITIVE DISPLACEMENT FLOW METERS	34	PRESSURE GUAGES
5	TURBINE FLOW METERS	35	MANOMETERS
6	VARIABLE AREA FLOW METERS	36	PRESSURE SWITCHES
7	MAGNETIC FLOW METERS	37	PRESSURE INDICATORS
8	VORTEX FLOW METERS	38	PRESSURE TRANSMITTERS
9	ULTRASONIC FLOW METERS		ACTUATED VALVES
10	PITOT TUBE	40	BLOW DOWN VALVES
11	CORIOLIS MASS FLOW METERS	41	ESD VALVES
12	FLOW SWITCHES	42	PROCESS ISOLATION VALVES
13	FLOW TRANSMITTER	43	CONTROL VALVES
14	BIMETAL THERMOMETER	44	SAFETY RELIEF VALVES
15	ROTAMETER	45	MOTOR OPERATED VALVE
16	DIFFERENTIAL PRESSURE TRANSMITTER		OTHERS
17	CORIOLIS FLOW METER	47	PIG SIGNALLER
18	MULTIPHASE FLOW METER	48	DCS CONTROL SYSTEM
	TEMPERATURE INSTRUMENTS	49	ESD SYSTEM
20	TEMPERATURE SENSING	50	F & G SYSTEM
21	THERMOWELLS	51	METERING SYSTEM

#### **INSTRUMENT**

ltem No.	Assembly Title	ltem No.	Assembly Title
22	TEMPERATURE LOCAL INDICATORS	52	TANK GAUGGING SYSTEM
23	RESISTANCE TEMPERATURE DETECTORS	53	PIPELINE LEAK DETECTION
24	THERMOCOUPLES	54	GLAND
25	TEMPERATURE GUAGE	55	JUNCTION BOX
26	TEMPERATURE SWITCH	56	CABLE
27	TEMPERATURE TRANSMITTER	57	ANALYZERS
	LEVEL INSTRUMENTS	58	CABLE GLAND
29	LEVEL GUAGE	59	CABLE TRAY

#### PACKAGES

## **UNITS/ SYSTEMS**

Item No.	Assembly Title	ltem No.	Assembly Title
1	AIR COMPRESSION PACKAGE	1	ACID GAS REMOVAL
2	AIR DRYER PACKAGE	2	CENTRAL PROCESSING UNIT
3	BURN PIT PACKAGE	3	CNG SYSTEM
4	CHEMICAL INJECTION PACKAGES	4	CO2 TOTAL FLOODING SYSTEM
5	CO2 TOTAL FLOODING SYSTEM	5	COCKING UNIT
6	CONDENSATE DEOILING UNIT PACKAGE	6	CONDENSATE AND WATER ROMOVAL
7	DEAERATION PACKAGE	7	CONDENSATE DE-OILING UNIT PACKAGE FOR UNIT
8	DEHYDRATION PACKAGE	8	CRACKING UNIT
9	DEMIN WATER PACKAGE	9	DILUTION WATER SYSTEM
10	DESALINATION PACKAGES	10	ETHANE RECOVERY UNIT
11	FLARE PACKAGES	11	FLOWLINES
12	WET LIQUID BURNER PACKAGE	12	FRACTIONATION
13	FOAM PACKAGE	13	GAS TRANSFER PIPELINE
14	GAS COMPRESSION STATION	14	GAS DISTRIBUTION SYSTEM
15	GAS METERING PACKAGE	15	GAS GATHERING UNIT
16	GAS NITROGEN PCKAGES	16	GAS LIQUIED STORAGE

16

## PACKAGES

#### **UNITS/ SYSTEMS**

	IAGNAULS		
Item No.	Assembly Title	ltem No.	Assembly Title
17	LEAN AMINE FILTRATION PACKAGE	17	GAS LIQUIED TRANSFER
18	LIQUID NITROGEN PCKAGES	18	GAS METERING SYSTEM
19	MEG PACKAGE	19	GAS REFINERIES
20	MEG RECLAIMER PACKAGE	20	GAS STORAGE SYSTEM
21	MEG REGENERATION PACKAGE	21	GAS SWEETENING
22	NITROGEN GAS GENERATION PACKAGE	22	GAS WELL COMPLETION
23	OIL METERING PACKAGE	23	GAS WELLHEAD FACILITIES
24	OXYGEN GENERATION PACKGES	24	HYDROSKIMMING UNIT
25	POLISHING WATER PACKAGE	25	LNG
26	POTABLE WATER TREATMENT PACKAGE	26	LPG
27	REMINERALIZATION & CONDITIONING	27	MANIFOLDS
28	REVERSE OSMOSIS PACKAGE	28	MERCURY REMOVAL
29	STEAM BOILER PACKAGE	29	NGL RECOVERY
30	SULFUR RECOVERY UNIT PACKAGES	30	NITROGEN RECOVERY UNIT
31	SULPHUR SOLIDIFICATION PACKAGE	31	NITROGEN REJECTION
32	TEG PACKAGE	32	OIL REFINERIES
33	TEG REGENERATION PACKAGE	33	OIL STORAGE SYSTEM
34	VACCUM DEAERATION PACKAGE	34	OIL TRANSFER PIPELINE
35	VACCUM PUMP PACKAGE	35	OIL WELL COMPLETION
36	VACUUM DEAERATION PACKAGE	36	OIL WELLHEAD FACILITIES
37	WASTE WATER TREATMENT PACKAGE	37	PROPONAE RECOVERY UNIT
38	WATER TREATMENT PACKAGES	38	SLUG CACTHER SYSTEM
39	OXYGEN ENRICHMENT PACKAGE	39	TAIL GAS TREATING
		40	TOPPING UNIT