



Complete Engineering Solutions for Water & Wastewater

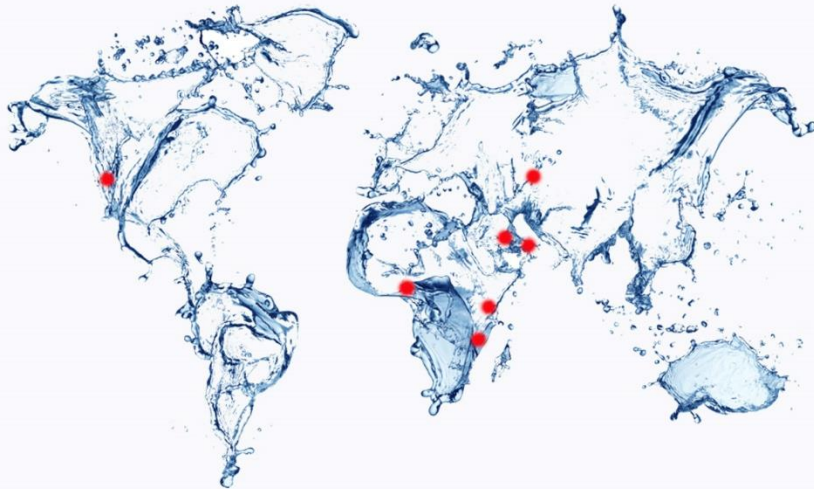


Technology that will enhance the quality of human health and improve the environment



GROUP OF COMPANIES

ISO CERTIFIED





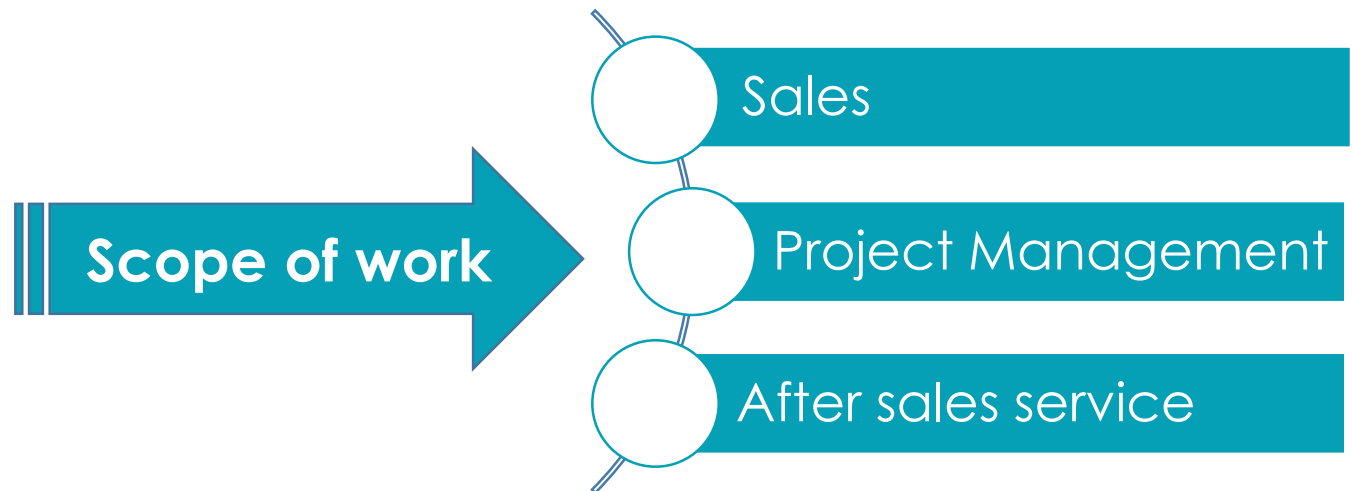
BROAD DESCRIPTION OF PACT SERVICES

- ✓ Process Design
- ✓ M & E Design
- ✓ Procurement
- ✓ Construction Supervision
- ✓ Installation
- ✓ Equipment Manufacture & Custom Fabrication
- ✓ Operation & Maintenance
- ✓ Provision of Chemicals & Consumables

BUSINESS OBJECTIVE

- ✓ Full service EPC (engineering, procurement and construction)
- ✓ Contractor in the field of industrial water and wastewater treatment.
- ✓ Focus on projects that demand process engineering and subsequently performance guarantees.
- ✓ Emphasize cooperation with the local environmental protect bureau and client consultant.
- ✓ Combining international with local products & services to provide workable solutions at competitive prices

- ✓ Established early in 1987
- ✓ Performed over hundreds industrial water and wastewater projects mainly for multinationals and partly for local clients
- ✓ Managed by Mr. George Hayek – Resident Manager
E-mail address: info@pacteng.ae



P
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- ✓ In 2001 registered in United Arab Emirates as PACT Engineering FZE
- ✓ ISO 9001:2008 Quality System Management System Certified.
- ✓ ISO 14001:2004 Environmental Management System Certified.
- ✓ OHSAS 18001:2007 Occupation Health & Safety Assessment.
- ✓ Managed by Mr. Arshak Toufenkjian – General Manager
E-mail address: info@pacteng.ae

Scope of work

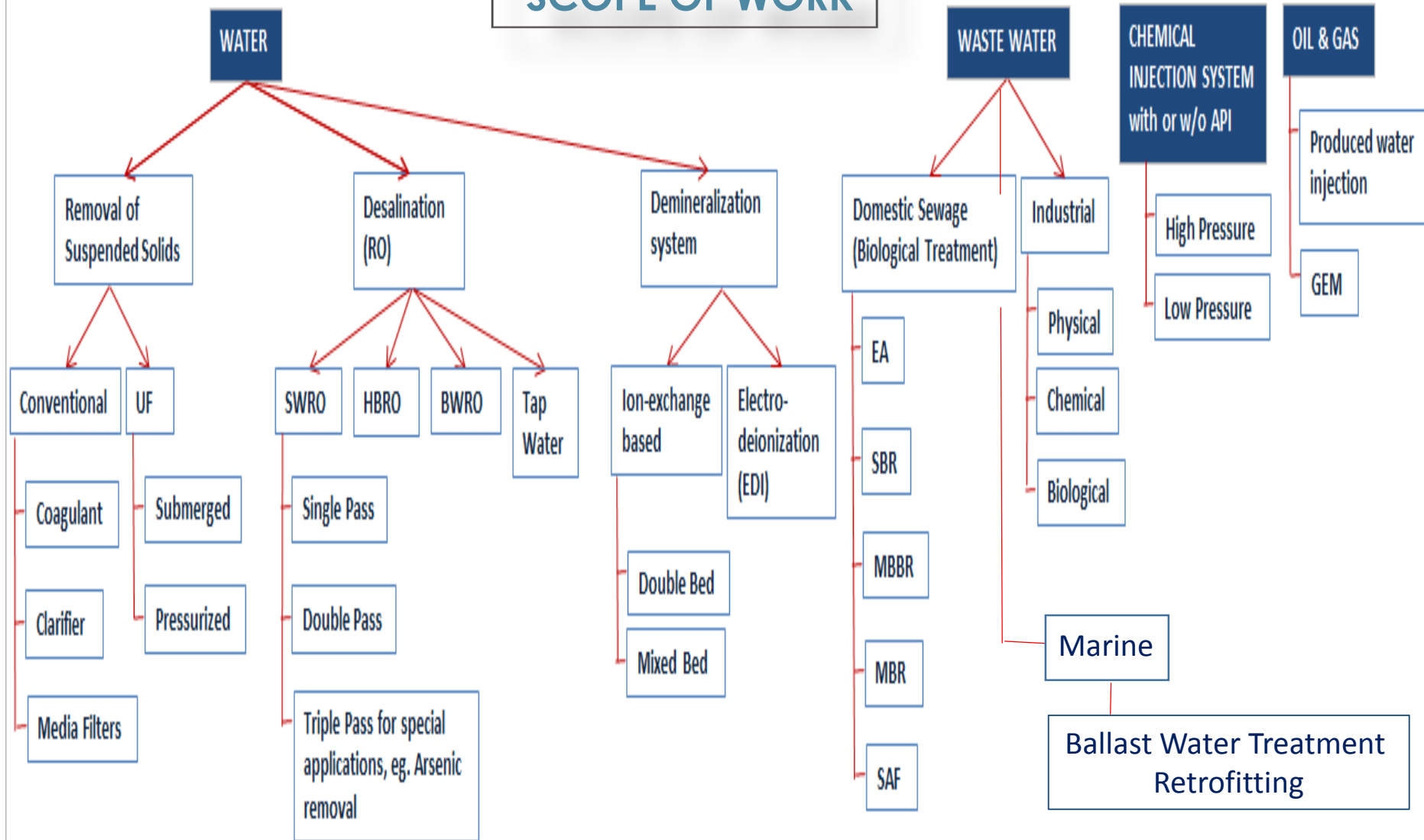
- Sales and marketing
- Engineering
- MEP project management
- EPC (Engineering, Procurement, Contracting)
- Fabrication & Assembly

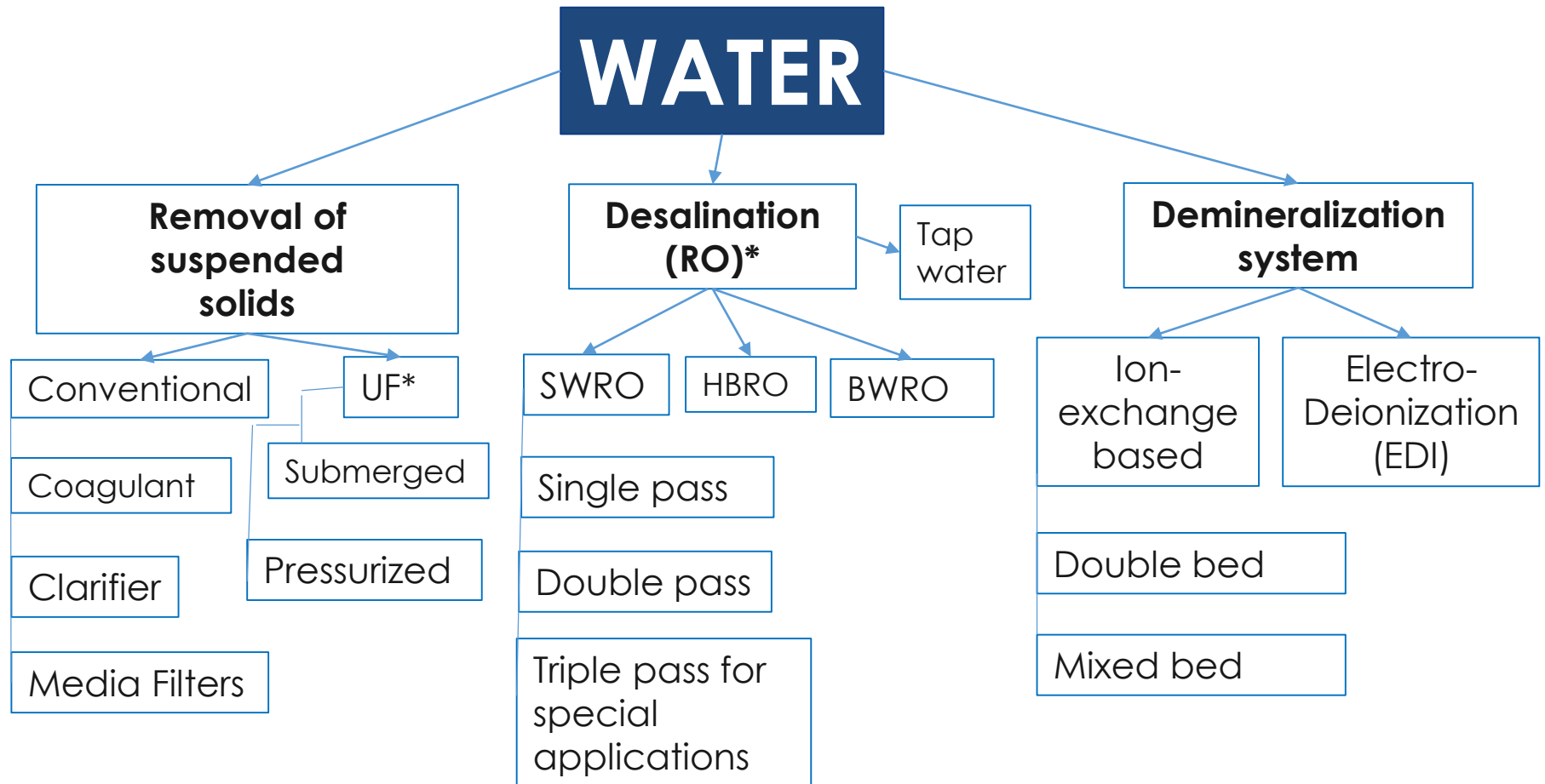
INDUSTRIAL SERVICES

- Pharmaceutical industries
- Semiconductor industries
- Printed circuit manufacturing
- Chemical and petrochemical industries
- Car and auto part manufacturing facilities
- Metallurgy industries
- Food and beverage
- Water treatment
- Reverse Osmosis
- Sewage Treatment
- Oil Separation
- Produced water injection



SCOPE OF WORK

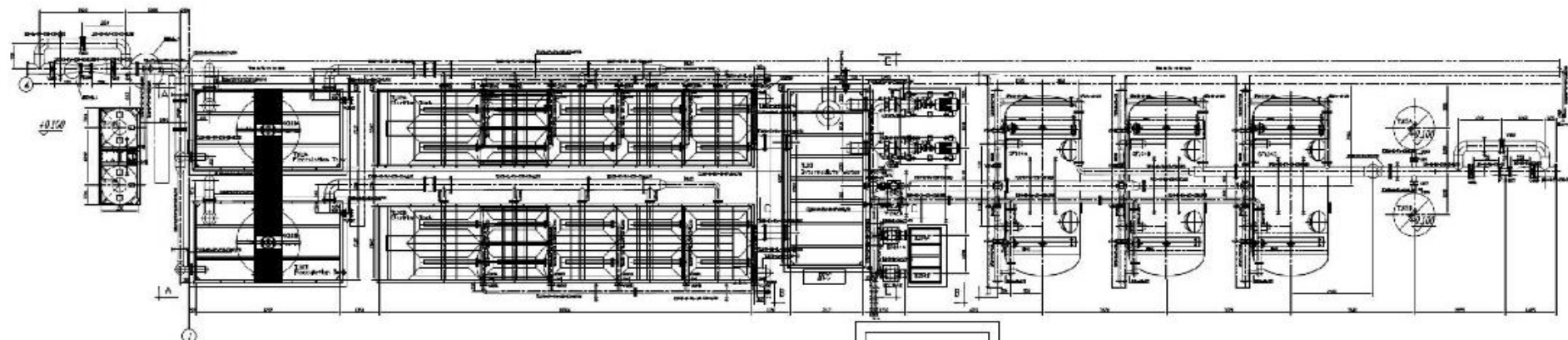






COMPACT WATER TREATMENT SYSTEM





SECTION A-A

SECTION B-D

SECTION C-C

SECTION D-D

SECTION E-E

NOTE:
1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT AS NOTED.
2. THE FLOOR ELEVATION 80.000 IS A RELATIVE ELEVATION SHOWN IN M.

				NIST National Institute of Standards and Technology		PROJECT: 2000A's Compact Water Treatment System CLASS:		DATED: 100-45-4	
		DRAWN BY:		CHECKED BY:		FIRING LAYOUT		DATE: 100-45-4	
CONFIRMED BY:		REV: 100-45-4		REVISIONS:				TIME: 100-45-4	

DRINKING WATER TREATMENT PLANT



DRINKING WATER TREATMENT PLANT







UF TREATMENT SYSTEM







REVERSE OSMOSIS DESALINATION PLANT

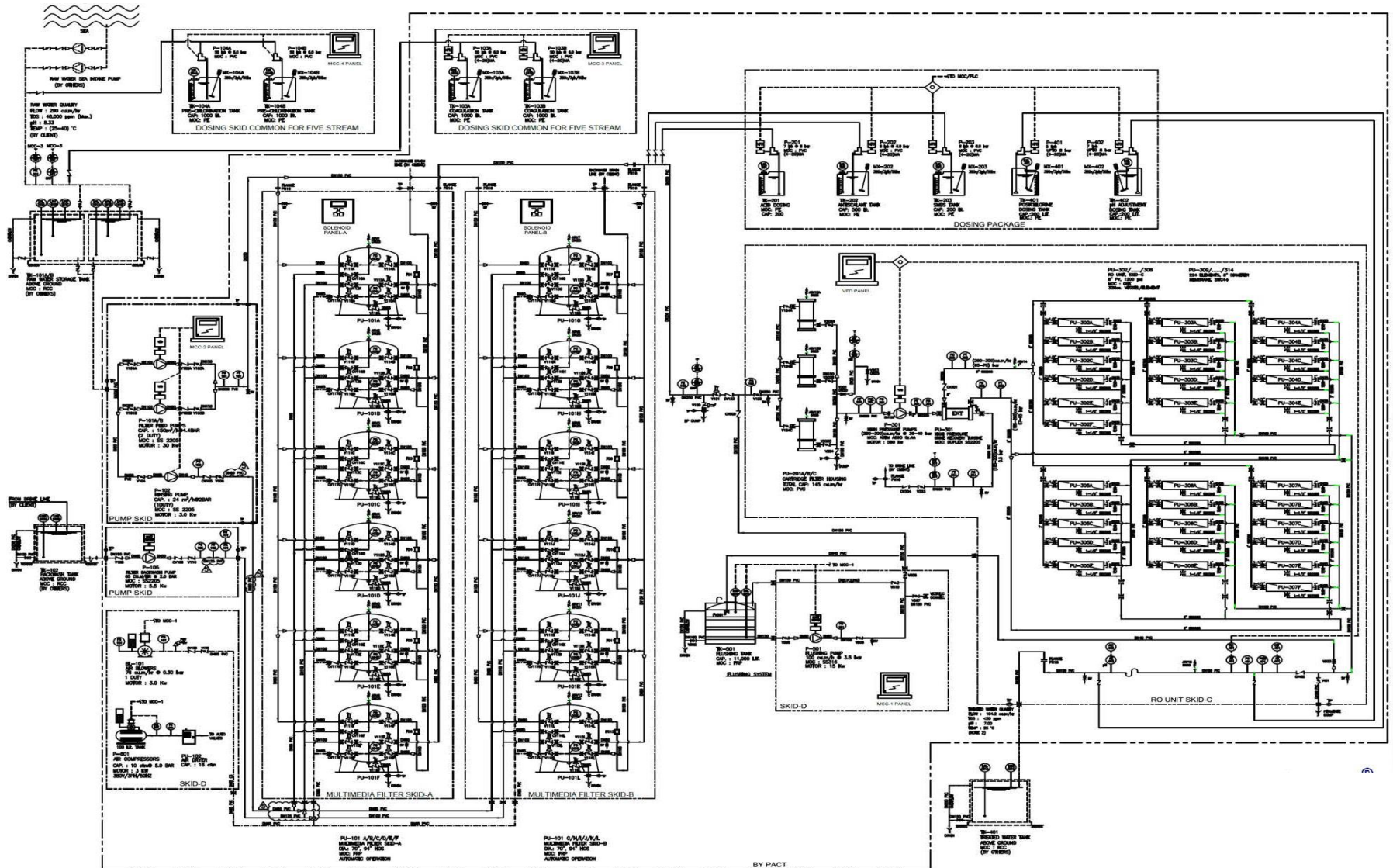


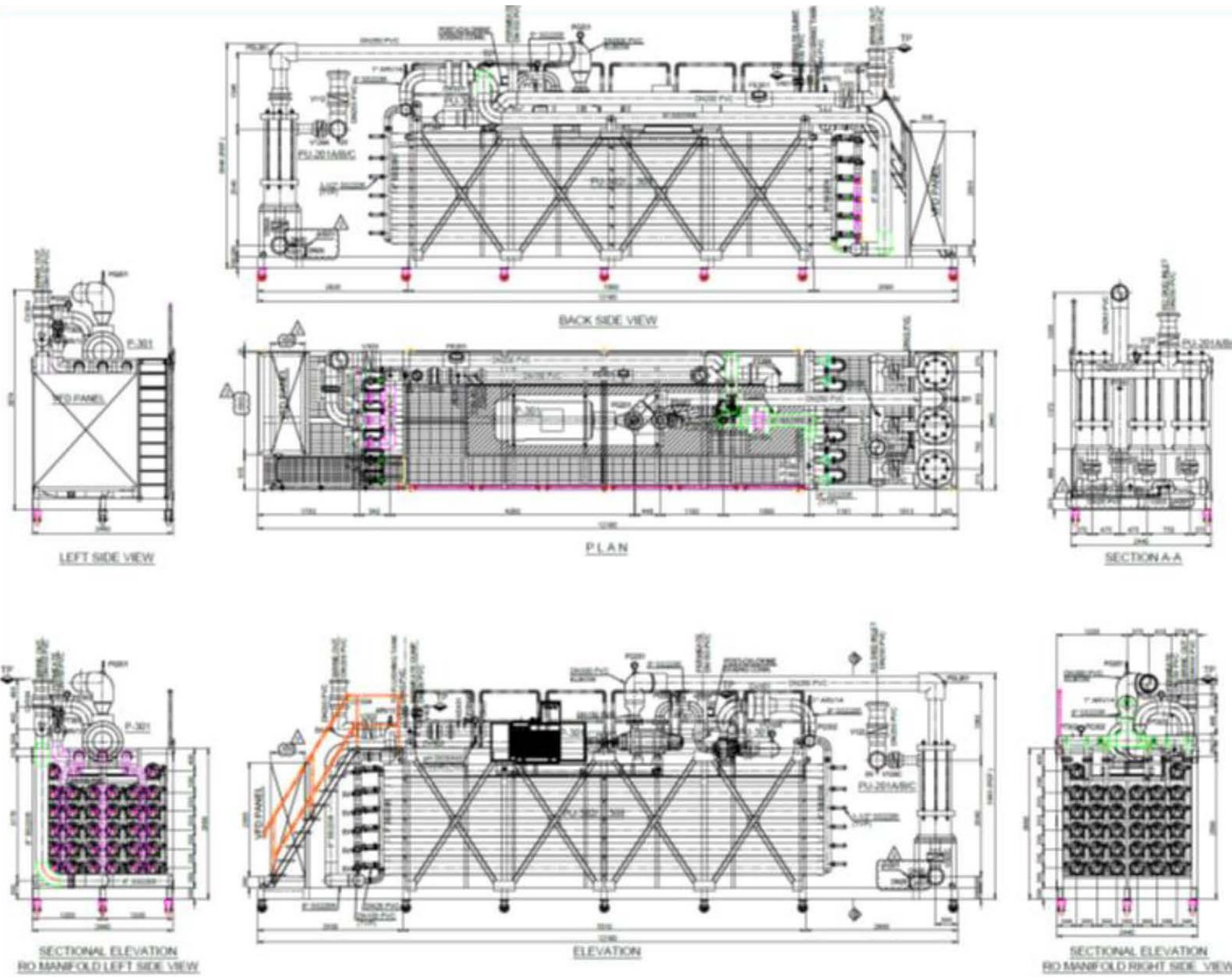




PRE-ASSEMBLED RO SYSTEM

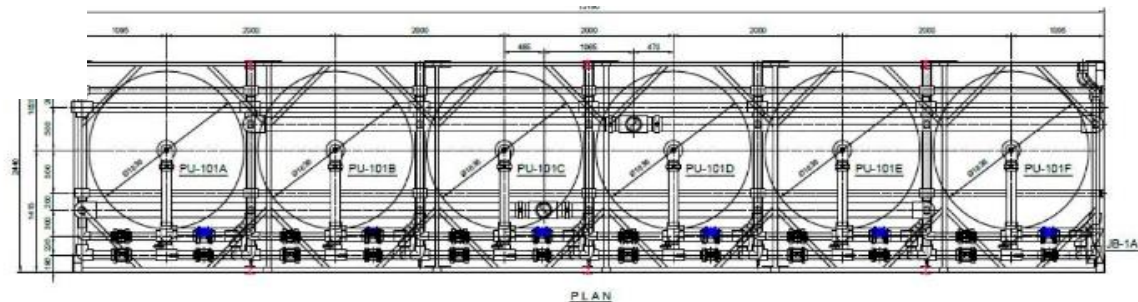




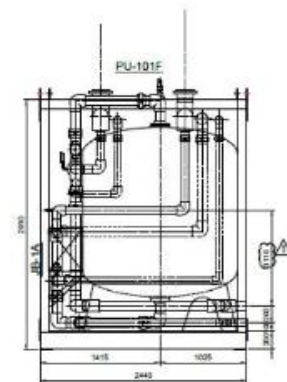
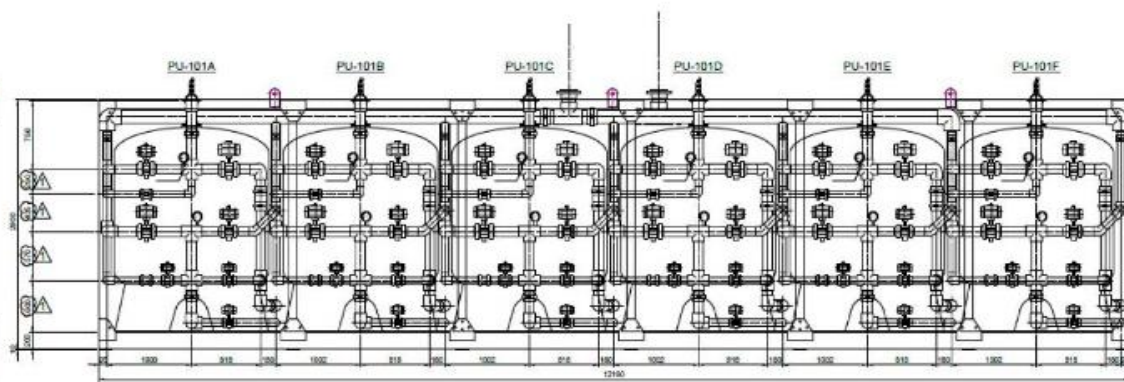
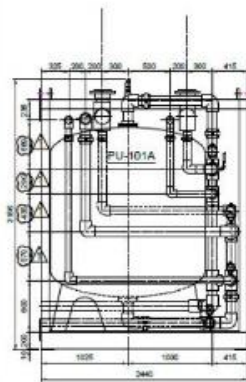


REFERENCE DRAWINGS

Project No.	CR394	Drawing No.	CR394-M-001	Date	10.03.10
Client	100	Prepared By	PM	Checked	10
Project	3x 2500 KLD SWRO				
Drawing Title	RO SKID-1 GA				
Scale	1:30				
Revision	02				
Sheet	01				



REFERENCE DRAWINGS :



Project No:		Drawing No:		Date:	
C9394		C9394-M-002		05 June	
Drawn By:		Reviewed By:		Revision:	
VM		PM		01	
Sheet:		1/1			

Client:

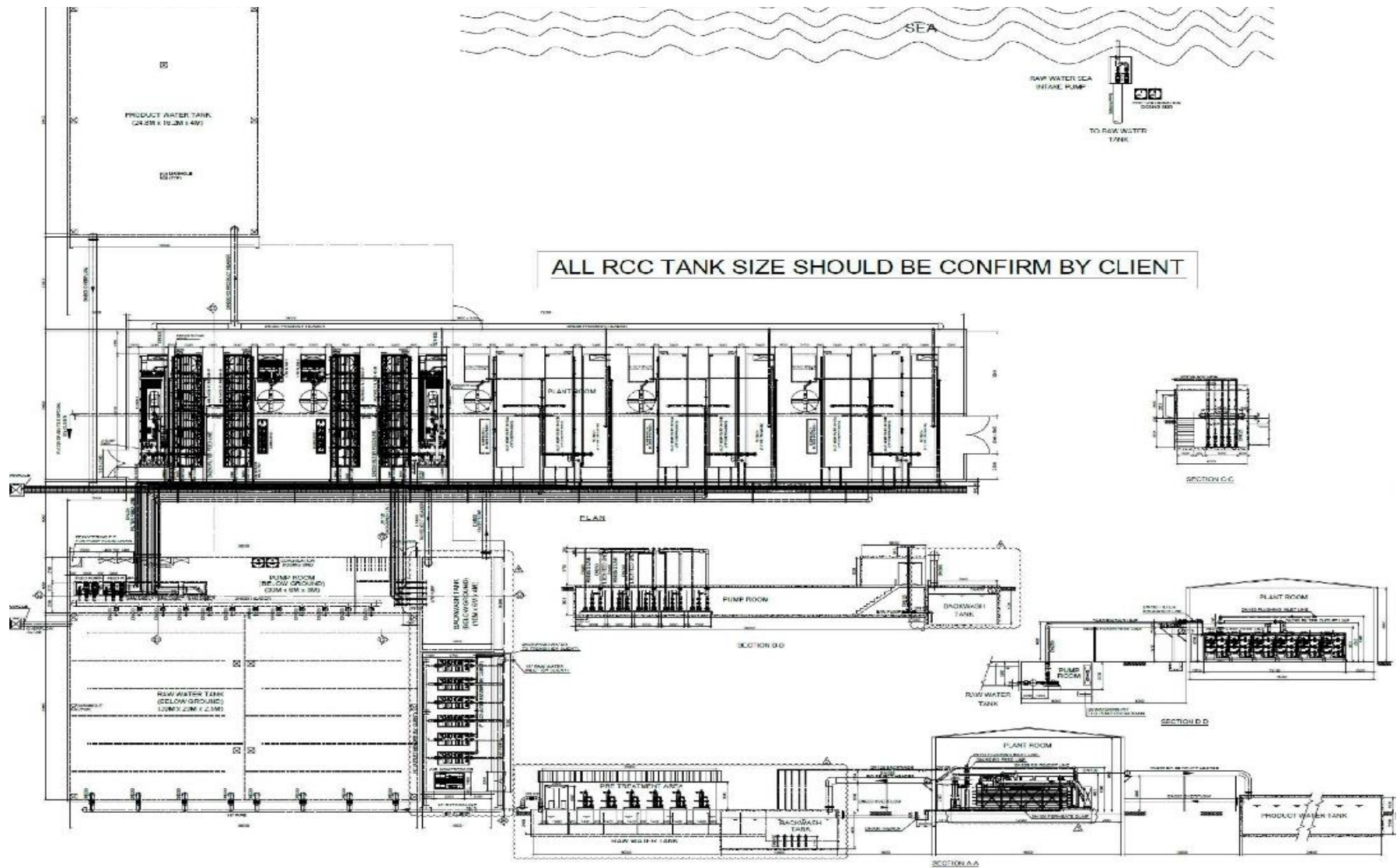
Project:

3x 2'500 KLD SWRO

Drawing Title:

MULTIMEDIA FILTER SKID-1A GA

Scale: 1:1



ALL RCC TANK SIZE SHOULD BE CONFIRM BY CLIENT

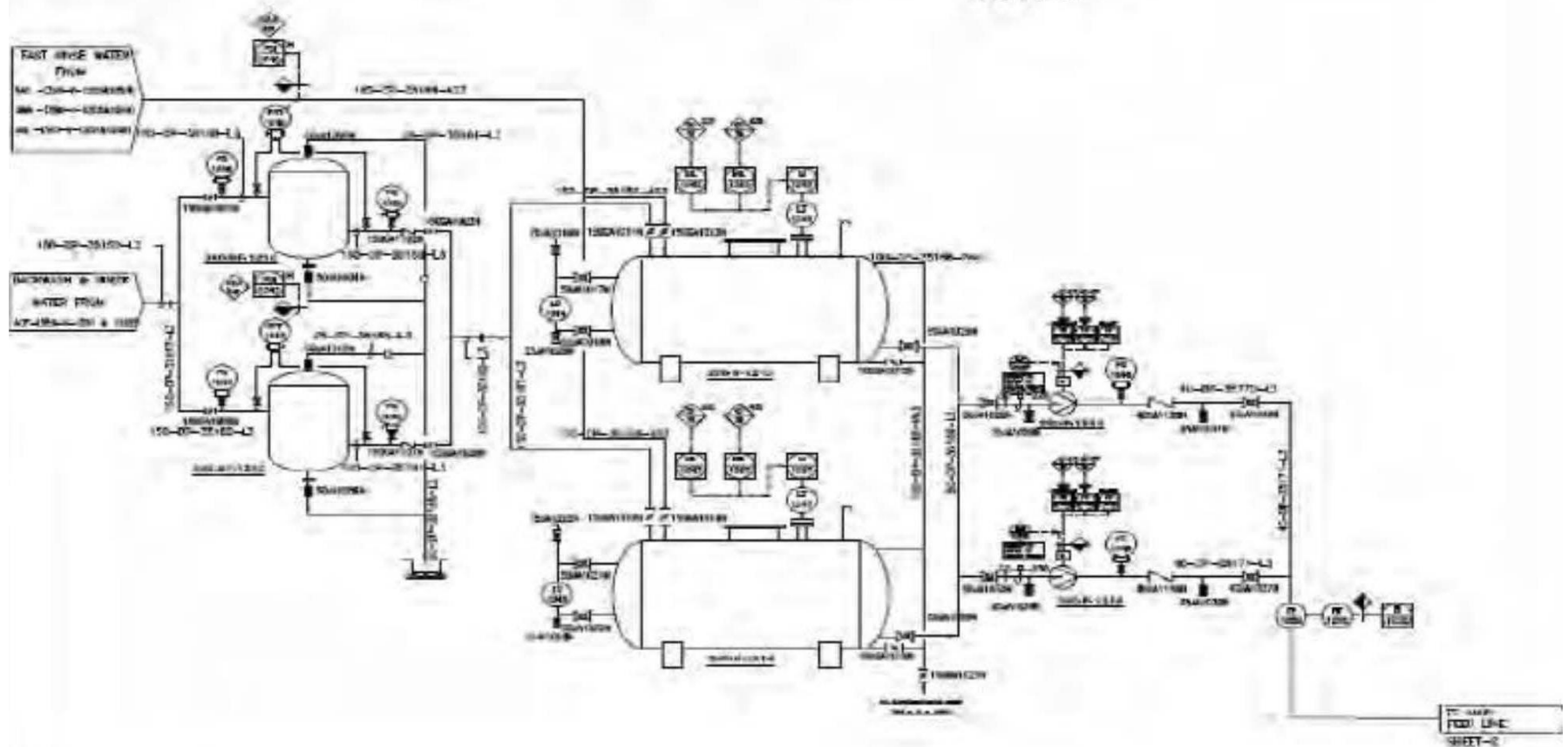
DEMINERALIZATION PLANT



DESIGN NO. 4314
DESIGN TITLE: CENTRIFUGAL PUMP
 CAPACITY : 20 m³/H
 HEC : 2.50m TDH + 10.0m LIFT
 DESIGN PRESSURE : ATMOSPHERIC
 DESIGN TEMP : 40 deg.C
 MATERIAL : CS
 TYPE: HORIZONTAL COLUMNAL TANK
 2 UNIT

DESIGN NO. 4315
DESIGN TITLE: CENTRIFUGAL PUMP
 TYPE: CENTRIFUGAL/VERTICAL MULTISTAGE
 CAPACITY : 5.78 m³/H
 DIFFERENTIAL HEAD : 0.3m
 MATERIAL : STAINLESS STEEL & CS
 1 UNIT STANDBY
 POWER : 2.2kw 100V/3PH/50HZ

DESIGN NO. 4316
DESIGN TITLE: CENTRIFUGAL PUMP
 CAPACITY : 140 m³/H
 DESIGN PRESSURE : 0.45 MPa
 DESIGN TEMP : 40 deg.C
 MATERIAL : CARBON STEEL
 TYPE : BAG FILTER
 SECTION : 10
 MATERIAL OF BAG : PO
 1 UNIT, STANDBY



DESIGN DATA

PLATE HEAT EXCHANGER

TYPE : PLATE HEAT EXCHANGER
 SLOW DOWN WATER FLOW : 10 m³/hr
 MATERIAL : SS316
 PLATE MATERIAL : SS316
 T.DUTY

DESIGN DATA FOR PLATE HEAT EXCHANGER

LEFT SIDE IN/OUT PRESSURE : 8.8/4.8 kg/cm²
 COLD SIDE IN/OUT PRESSURE : 5/3 kg/cm²
 TEMP. OF SLOW DOWN WATER INLET TO H.C. 104°C
 TEMP. OF SLOW DOWN WATER OUTLET FROM H.C. 42°C
 TEMP. OF TREATED WATER INLET TO H.C. 33°C
 TEMP. OF TREATED WATER OUTLET FROM H.C. 49°C

DESIGN DATA FOR PLATE HEAT EXCHANGER

DESIGN PRESSURE HOT SIDE : 38 kg/cm²
 DESIGN PRESSURE COLD SIDE : 10.8 kg/cm²
 DESIGN TEMP. HOT SIDE : 130°C
 DESIGN TEMP. COLD SIDE : 50°C

DESIGN DATA FOR PLATE HEAT EXCHANGER

NET CAPACITY : 110 m³/hr
 SIZE : 2000mm dia x 1000mm HTG
 DESIGN PRESSURE : 11 kg/cm²
 WORKING PRESSURE : 8 kg/cm²
 PROCESS DESIGN TEMP : 100 deg C
 MECHANICAL DESIGN TEMP : 100 deg C
 INTERNAL : 300P
 DESIGN CODE : ASME SEC VIII DIV 1
 1/2" JCT, 1/2" TACKLE



FRESH WATER INLET

pH @ 20°C : 7.5 TO 8.5
 Turbidity : 1-5 NTU
 COND : 30-120 µmhos/cm
 TDS : 50-60 ppm
 CLOR : 4-10 mg/l
 Temp : 20-30 °C Max

FRESH WATER INLET

TO NEUTRALIZATION BASIN

TO NEUTRALIZATION BASIN

SHEET-2

TO NEUTRALIZATION BASIN

SHEET-3

TO NEUTRALIZATION BASIN

SHEET-4

TO NEUTRALIZATION BASIN

SHEET-5

TO NEUTRALIZATION BASIN

SHEET-6

TO NEUTRALIZATION BASIN

SHEET-7

TO NEUTRALIZATION BASIN

SHEET-8

TO NEUTRALIZATION BASIN

SHEET-9

TO NEUTRALIZATION BASIN

SHEET-10

TO NEUTRALIZATION BASIN

SHEET-11

TO NEUTRALIZATION BASIN

SHEET-12

TO NEUTRALIZATION BASIN

SHEET-13

TO NEUTRALIZATION BASIN

SHEET-14

TO NEUTRALIZATION BASIN

SHEET-15

TO NEUTRALIZATION BASIN

SHEET-16

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SHEET-17

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SHEET-18

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SHEET-19

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SHEET-20

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SHEET-26

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SHEET-27

TO NEUTRALIZATION BASIN

SHEET-28

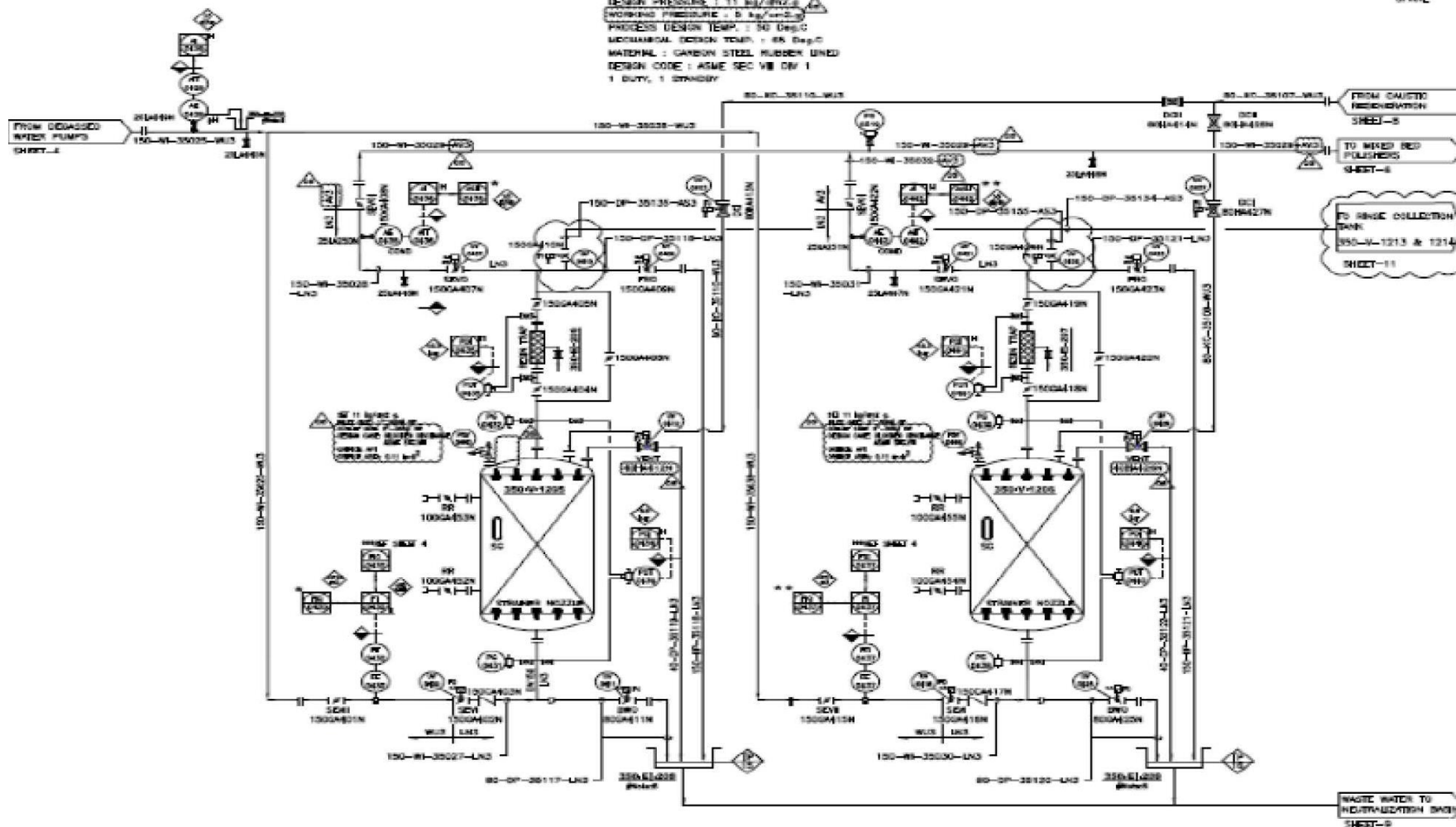
TO NEUTRALIZATION BASIN

SHEET-29

350-V-1200 & 350-V-1200
 DIRECT BACK ANCHOR RECYCLING
 NET CAPACITY : 110 m³/hr
 SIZE : 2500 mm Dia. x 2430 mm HGT
 DESIGN PRESSURE : 11 kg/cm²
 WORKING PRESSURE : 5 kg/cm²
 PROCESS DESIGN TEMP. : 50 Deg.C
 MECHANICAL DESIGN TEMP. : 65 Deg.C
 MATERIAL : CARBON STEEL RUSTEN UNED
 DESIGN CODE : ASME SEC VIII DIV 1
 1 DUTY, 1 STANDBY

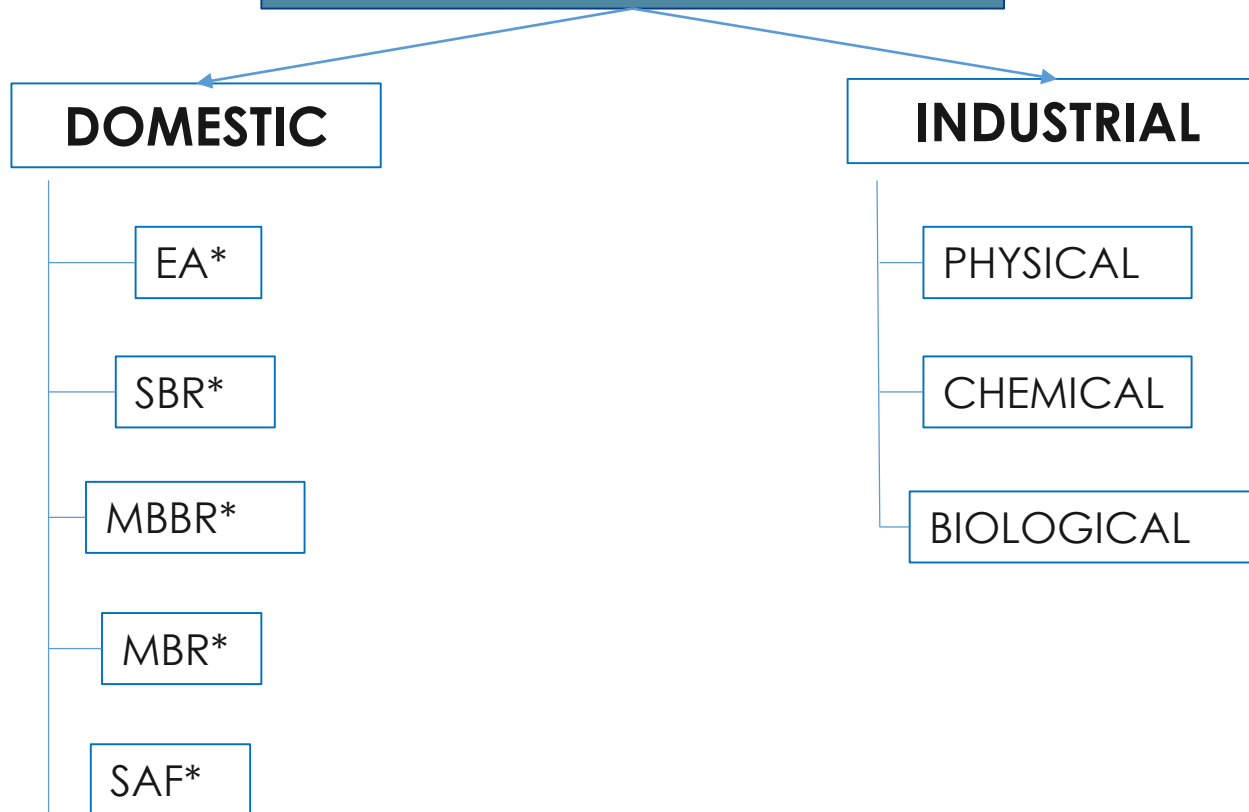


SPARE





WASTE WATER



PACKAGE SEWAGE TREATMENT PLANT WITH ZERO LIQUID





SEWAGE TREATMENT PLANT





MODULAR MBBR PACKAGE





MODULAR MBR PACKAGE





SAF SYSTEM



CHEMICAL INJECTION SYSTEM WITH OR WITHOUT API*

HIGH
PRESSURE

LOW
PRESSURE

OIL & GAS

PRODUCED WATER
INJECTION*

GEM*





CHEMICAL INJECTION SKID MOUNTED PACKAGE

GEM SYSTEM

Gas Energy Mixing, a Patented Technology is an innovative flocculation and floatation unit having unique approach and replacement to traditional DAF treatment system:

1. Superior Aeration
2. Flow and contaminant loading freedom
3. Smaller footprint
4. Drier sludge
5. Standardized system design, cost effective



OZONE SYSTEM

- Comprise of the following components and optional items
- Ozone Generator 1 kg/hr to 150 kg/hr
- Catalytic or Thermal Ozone Destructor
- Oil less compressor and dryer
- Titanium Diffuser
- Air or water cooled chiller for Ozone Generator
- Programmable Logic Controller
- Motor Control Panel
- CSEP / SS304 / SS316 skid holding above components
- Oxygen feed Control Valve
- Oxygen feed flow indicator and transmitter
- Dew Point Analyser
- Oxygen Concentration Analyser
- Ozone Concentration Analyser
- Temperature & Pressure Instruments
- Oxygen Leak Detector
- Ozone Leak Detector

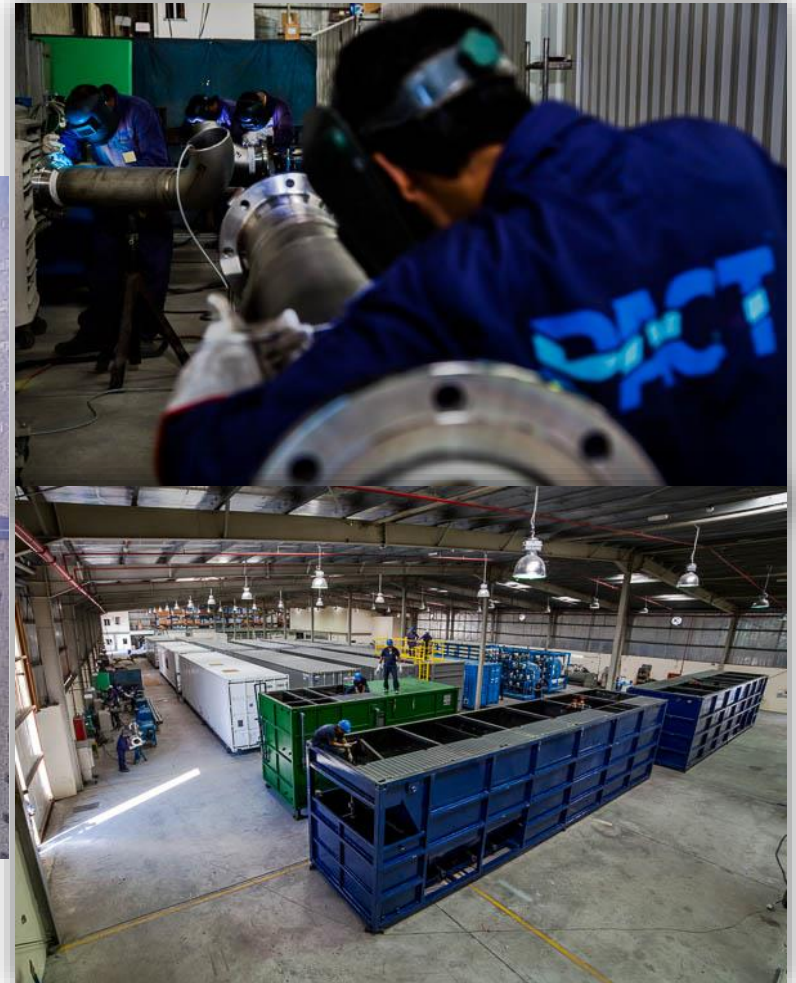


CASE STUDY – SINGAPORE AIRLINES





PACT'S MANUFACTURING FACILITY





EQUIPMENT PARTIAL LIST





Few of PACT's Clients



ThyssenKrupp



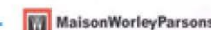
GENERAL MILLS



South Raabab Engineering Co.



Industrial Design & Construction





Professional Ambitious Creative Team!

