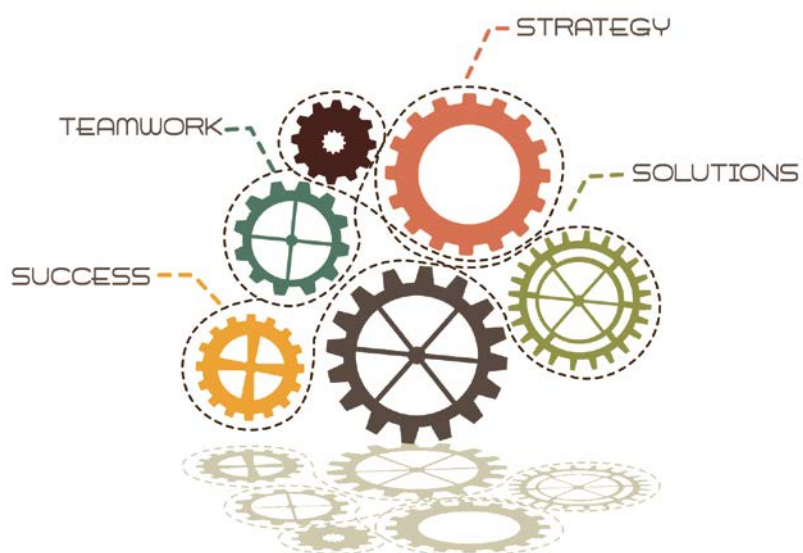




IPS Engineering

Industrial **P**rocess **S**olutions



COMPANY INFORMATION

Company

IPS Engineering is an engineering company, providing specialized advisory services to broad range of industries such as chemical, petroleum, pulping, power generation, waste treatment, alternative fuels, and more.

The company is founded in 2007 as a local consulting company.

The company core competence is related to its experts and consultant. They are high-qualified engineers that their professional abilities derive from profound theoretical knowledge and long years experience.



IPS is a node in a grid of wide range of companies, hold together by common convictions and experience. That cluster we call IPS Partnership. By our Partnership Service Platform, we provide procurement, manufacturing, commissioning, consulting and specialized training to our clients, helping the sustainable development of their business.



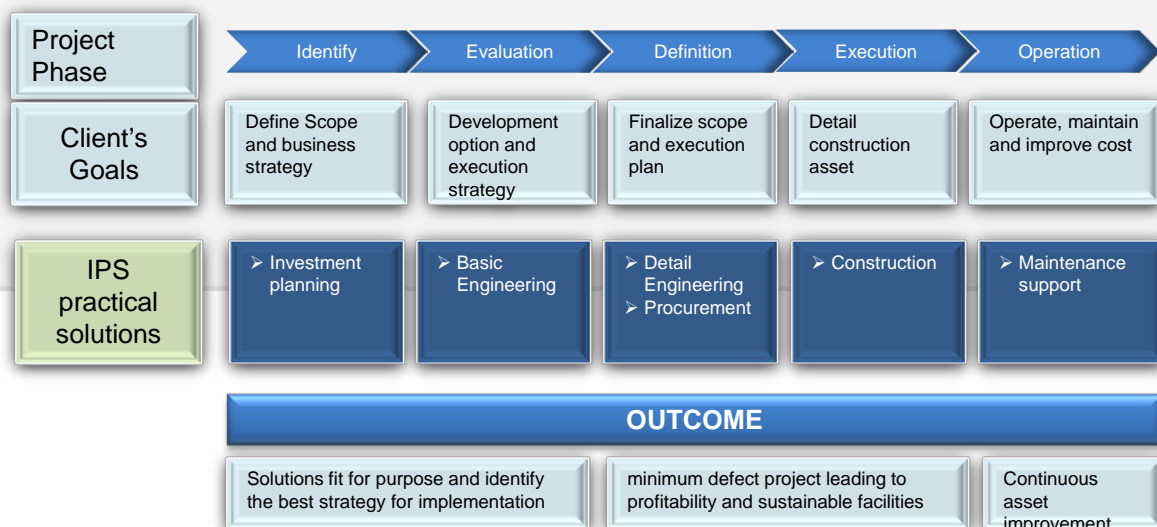
Mission & Philosophy

To retain high value quality, increase efficiency, reduce process variability and costs and finally be competitive; We conduct technical and business consulting services through a succession of stages necessary for the success of any initiative.



We assist customers in the project development and realization process – from the preliminary research, feasibility study, conceptual design, technology selection, assignment of tasks specification to the detailed engineering design, procurement, construction, commissioning & start-up, maintenance & optimization and personnel training.

This unique focus allow us to develop services to trigger process improvement, providing a range of " Services to Compete". In this manner, with market conditions ever changing, we offering the engineering services at an extremely affordable price.

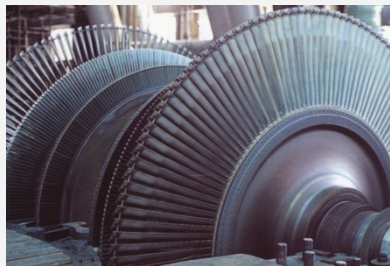


Our concept is to provide innovative solutions developed for the needs of each individual customer and practical solutions of complex industrial problems at high professional level.

Areas of expertise

OIL & GAS

- ✓ Refining plants
- ✓ Surface facility



ENERGY

- ✓ Cogeneration system
- ✓ Biodiesel
- ✓ Biomass to biofuels



VEGETABLE OIL & FAT

- ✓ Edible oil refining
- ✓ Oleochemicals
- ✓ Glycerine recovery

ENOLOGY

- ✓ Must concentration
- ✓ Reverse osmosis
- ✓ Desulfurization



NON WOOD PULP & PAPER

- ✓ Alkali-Oxygen delignification
- ✓ Dissolving pulp
- ✓ Kappa reduction
- ✓ Deinking & Bleaching



Company Workflow

Commercial

First

- Prequalification
- Tender documents
- Bid-no bid

Next

- Offer
- Review offer
- Adoption offer
- Commercial negotiations
- Contract



Project management

Project start

- Review of the contract
- Identifying critical issues and risks
- Planning and programming
- Supply and transport policy
- Feasibility and constructability

Management plan

- Architecture of plan
- Project Control
- Management risks and modifications
- Feedback from the project

Quality

- Quality plan
- Audits
- Lessons learned



Company Workflow

Technical and Business Consultancy

Investment planning

- Preliminary research
- Technical and financial assessments
- Pre feasibility and feasibility Studies
- Conceptual process design studies
- Preliminary cost estimates
- Costs vs. benefits analyses
- Alternatives evaluations studies
- Capacity evaluations/revamp studies
- Evaluation of 3rd party process designs
- Best practices/techniques consulting

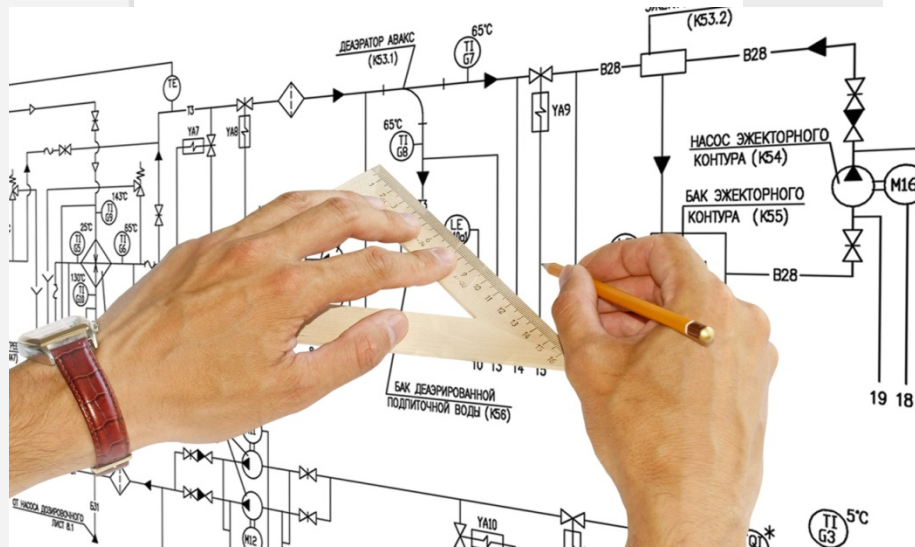


Company Workflow

Design

Process

- Design Criteria
- PFD and P&ID
- Item list
- Process data sheet
- Plot plan & model
- Preliminary hazard analysis
- Duty spec. package and complex items



Detail design

- Isometric drawings, piping and mounting brackets
- Construction designs
- Spec. and document of installation
- Final materials list
- Electrical, control and Instrumentation layout.
- Utility systems expansion and upgrades
- Effluent plant layout

Front End

- P&ID mechanization
- Plant planting
- Electro-instrument systems
- POS for complex item
- Items specifications
- Process hazard analysis (PHAs) and risk evaluation
- Safety integrity level (SIL) study
- Cause & effect diagrams
- Fire protection study

Detail during the construction

- Available materials and documentation
- Permission to change as built document

Details of the items and the bulk

- POS
- Development model
- Stress Analysis
- Materials list
- Follow up supplying
- Mechanical book
- Spare Parts

Outsourcing

Procurement

Qualification of suppliers

- Purchase material and services
- Vendor list
- Issue RDO
- Commercial Ratings
- Issue orders

Quality control

- IDS
- Inspection report
- Non-compliance
- Certificates

Expediting and shipments

- ASO
- MSR
- Shipping file



Construction

Mechanical completion

- Mech. compl. book
- Mech. compl. cert.
- Dossier of QC

Commissioning, start up and test run

- Ready ON certification
- Test run report
- Provisional acceptance



Selected References

GLYCEROL PURIFICATION PILOT PLANT

IPS JOINT VENTURE
BASIC & DETAILED ENGINEERING, TECHNICAL
SPECIFICATION FOR EQUIPMENT AND CONSTRUCTION –
TRIAL TEST ASSISTANCE
2014
ITALY

DISSOLVING PULP PRODUCTION PLANT

SUN PAPER INDUSTRY JOINT
BASIC ENGINEERING FOR 100,000 TPA DS PULP FROM
COTTON LINTERS
2012-2013
CHINA

ZUBAIR OIL FIELD DEVELOPMENT PROJECT

ENI-IRAQ
EXISTING DEGASSING STATIONS STUDY
2011
ZUBAIR IRAQ

ZUBAIR OIL FIELD DEVELOPMENT PROJECT

ENI-IRAQ
PROCESS FEASIBILITY VERIFICATION FOR ZUBAIR "P90"
PRODUCTION TREND YEAR 2010-2011
2010
ZUBAIR IRAQ

LPG MEROX TREATMENT PACKAGE- UOP PROCESS

PERSIAN GULF STAR OIL COMPANY
BUDGETARY PROPOSAL FOR LPG MEROX TREATMENT
PACKAGE
2010
BANDAR ABBAS REFINERY IRAN

GAS COMPRESSION PACKAGES

S.N.G.N. ROMGAZ S.A.
PROCESS VESSEL AND SAFETY VALVES SIZING FOR
BOGATA, LUDUS, ERNEI, SG. DE PADURE, BORDOSIU UNIT
2010
ROMANIA

ENI VENICE REFINERY

PLOIMERI EUROPA S.P.A.
ENI REFINING & MARKETING
HEAT EXCHANGER SIZING FOR ETHYLENE-PROPYLENE
REFRIGERATION UNIT
2010
ITALY

Selected References

KARACHAGANAK- URALSK GAS PIPELINE

KARACHAGANAK
PRESSURE REDUCING SYSTEM RATING AND SPECIFICATION
2009
KAZAKISTAN

GAS COMPRESSION UNIT

SONATRACH DP/HMD
PROCESS DETAILED ENGINEERING, TECHNICAL
SPECIFICATION FOR EQUIPMENT AND CONSTRUCTION -
PROCUREMENT ASSISTANCE-ENVIRONMENTAL
PERFORMANCE EVALUATION-LIFE CYCLE ASSESSMENT
2009-2010
HASSI-MESSAOUD (ALGERY)

ENI VENICE REFINERY

ENI REFINING & MARKETING
RBI ANALYSIS -OFFSHORE PIPELINE
2008
ITALY

ENI VENICE REFINERY

ENI REFINING & MARKETING
FIRE FIGHTING NETWORK CHECK UP HYDRAULIC MODEL AND
CALCULATION
2008
ITALY

MA' ADEN PHOSPHATE PROJECT

LITWIN IT
PROCESS DESIGN BASIS AND EQUIPMENT DESIGN
2008
S. ARABIA

ENI SANNAZZARO REFINERY

ENI REFINING & MARKETING
NATIONAL REGULATION FOR PRESSURE EQUIPMENT
DIRECTIVE ACCOMPLISHMENT (D.M. 329/04)
2008
ITALY

POTASSIUM NITRATE CRYSTALLIZATION PLANT KNO₃

ABB S.P.A.
TECHNICAL SPECIFICATION FOR EQUIPMENT AND
CONSTRUCTION - DETAILED ENGINEERING AND
PROCUREMENT ASSISTANCE
2008
COYA SUR (CHILE)

Selected References

LUBRICATION OIL RECEIVING, HANDLING AND DISTRIBUTION PLANT

SARL RABIE INDUSTRIE (ALGERI)
TECHNICAL PROPOSAL - PRELIMINARY CONCEPTUAL AND BASIC DESIGN
2007
ALGERIA

ONSHORE RECEIVING FACILITIES

SEI (SAIPEM ENERGY INTERNATIONAL) FOR ENI E&P
BASIC AND DETAILED ENGINEERING FOR AWA-PALOUKOU PLATFORM
AND ONSHORE RECEIVING FACILITIES AT DJENO TERMINAL (AWA
PALOUKOU AND APPOINT GAS).
2005-2007
CONGO

SULFUR PLANT

ENI - R&M
BASIC AND DETAILED ENGINEERING OF DISTRIBUTION-ENGINEERING OF
SAFETY SYSTEM
2007
ITALY

PENICILLIN G AND CLABULANIC ACID PLANT

TEMAD- (IRAN)
BUDGETARY PROPOSAL FOR "BASIC ENGINEERING DESIGN PACKAGE"
2006
IRAN

CELLULOSE PRODUCTION PLANT

CELLULOSA 2000 S.P.A
BASIC AND DETAILED ENGINEERING
EQUIPMENT AND LINE SIZING; TECHNICAL SPECIFICATION AND
COMPARISON, CONSTRUCTION AND TEST ASSISTANCE, COMMISSIONING
AND START-UP
2000-2003
ITALY

MEROX BENZINE MIN-ALK TURN-KEY PLANT – UOP PROCESS

AGIPRAFFINAZIONE S.P.A. –SANNAZZARO D. B. REFINERY
P&ID, BASIC AND DETAILED ENGINEERING, TECHNICAL SPECIFICATION
FOR EQUIPMENT, LINE SIZING AND TECHNICAL COMPARISON -
CONSTRUCTION AND TEST ASSISTANCE, COMMISSIONING AND START-
UP - OPERATING AND MECHANICAL MANUAL - NATIONAL REGULATION
FOR PRESSURE EQUIPMENT DIRECTIVE ACCOMPLISHMENT (ISPESL)
1994-1997
ITALY

Selected References

ONSHORE RECEIVING FACILITIES

ENI – E&P – BASIC AND CONCEPTUAL DESIGN FOR KALAMKAS PROJECT
2004-2005
NORTH EAST CASPIAN SEA

NEW TOLUENE RECOVERY PLANT FOR PRINTING FACTORY

MAUL BELSER GMBH (WITH CO-VER IMPIANTISTICA)
TECHNICAL MANAGER ,CONSTRUCTION AND TEST ASSISTANCE, COMMISSIONING
AND START-UP,OPERATING AND MECHANICAL MANUAL
2003
NORIMBERGA (D)

Wafa Coastal Offshore Plant

TECHNIP AT TECNIMONT (FOR AGIPGAS BV)
SUPERVISION OF PROCESS DETAILED ENGINEERING
2003
(LIBYA)

PP, HDPE E LDPE PLANT

TECNIMONT
CALCULATION OF PSV'S AND BLOW DOWN NETWORK
2002
ITALY

WAX VACUUM, HD2, UNI 2

AGIPPETROLI –LIVORNO REFINERY
STUDIES FOR PLANT REVAMPING
2002
ITALY

BIOMASS POWER PLANT (WOOD CHIPS)

CELLULOSA CALABRA S.P.A.
BASIC AND DETAILED ENGINEERING
EQUIPMENT AND LINE SIZING; TECHNICAL SPECIFICATION AND COMPARISON,
CONSTRUCTION AND TEST ASSISTANCE, COMMISSIONING AND START-UP
1998-2000
ITALY

IPS ENGINEERING SRL

Registered Office: Via Piranesi, 26

20137 Milano (MI)

Fax: (+39) 02362 156 74

www.ips-engineering.it

info@ips-engineering.it

References



IPS is ISO certified in accordance with standard UNI EN 9001-2008.

IPS Engineering

IPS ENGINEERING S.R.L.
Via Piranesi, 26
20137 Milano
Italy

P.IVA/C.F. 06900670966

fax. +39 02 362 156 74
e-mail. info@ips-engineering.it

www.ips-engineering.it