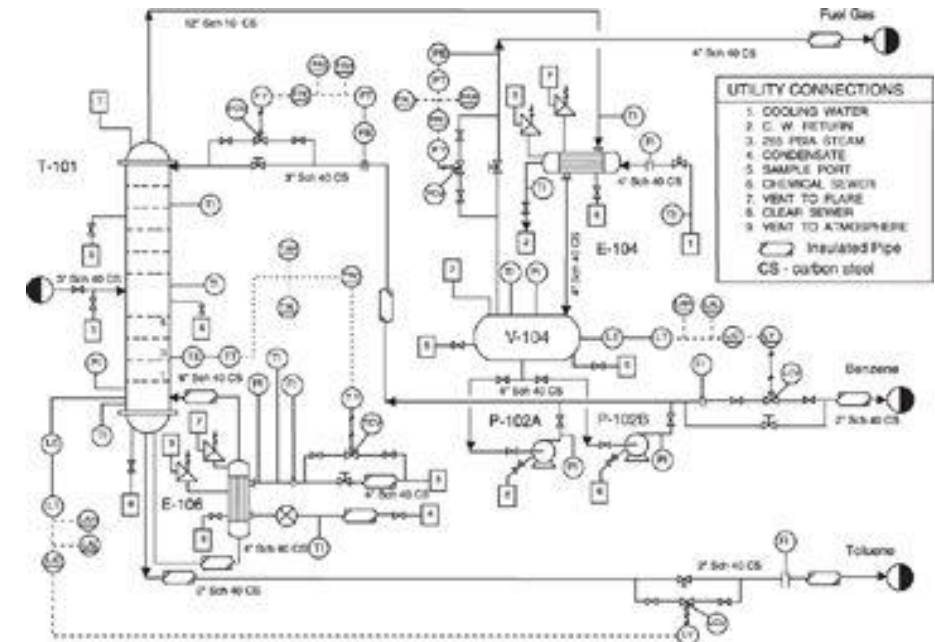


# Instrumentation 1/2

This expertise covers all the instruments that measure and control industrial processes (sensors, control valves, actuators, regulators, analysers).

Ekiium supports you in all your instrumentation projects (revamping, debottlenecking or new units), from definition to commissioning. Its expertise enables you to comply with regulations (calculations SI, SIL, ATEX).



## THE KNOW-HOW

- ③ Project management for the revamping or design of a new unit
- ③ Definition, choice of instrumentation
- ③ System migration studies and project management
- ③ Participation in risk studies (HAZOP, LOPA, ...)
- ③ Ism'ATEX certification (Training)
- ③ SI loop calculation
- ③ SIL loop calculation
- ③ Execution studies
- ③ Follow-up of works
- ③ Pre-reception operation, commissioning
- ③ Turnkey solutions

# Instrumentation 2/2

## SECTORS

- ⌚ Chemical / Petrochemical
- ⌚ Energy & Environment
- ⌚ Nuclear
- ⌚ Oil and Gas
- ⌚ Paper industry
- ⌚ Life Science
- ⌚ Glassware

## DELIVRABLES

- > Block diagram, Process Flow Diagram, PID/UID
- > Instrumentation list,
- > Schematic diagram of actuator control
- > Installation diagram
- > Layout plan for instruments, routing, cables...
- > Terminal block diagram, Loop diagram
- > List and synchronisation sheets

## REGULATION

- ⌚ NF EN 62305
- ⌚ Directive ATEX 94/9/CE
- ⌚ Machinery Directive 2006/42/CE
- ⌚ NF EN 61508
- ⌚ NF EN 61511



- > Functional analysis 1st level,
- > Specification instruments, analysers...
- > Technical memory (Basic Engineering Design, Front end engineering design), rapport d'étude, estimation budgétaire, planning...
- > Book of Specific Technical Clauses for the consultation of the works
- > Calculation notes, dimensioning (cables, SI barriers...),
- > Assistance and Interfaces with batches Process, HVAC, General Installation