Misure Fiscali

Milan, 25 October 2018
Auditorium TECNIMONT

Best Practice in the Engineering of the Metering Systems
Best Practice in the Engineering of Metering Systems

Best Practice:

Collection of technique, solutions, procedures or methodology not limited to technical disciplines that, through experience and research, has proven to reliably lead to a desired result.

Metering System:

an assemblage or combination of things or parts based on multiple disciplines and know how forming a complex or unitary whole of measure
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Project Team: members, structure, organization, competence, rules, responsibility

Project Management & Team work selection
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Team work_Progress Control
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Team work_progress Control
Preliminary Analysis:

- Risks
- Opportunities
- Objectives

PM has in charge this study which is even based on the input of the engineering analysis. And in the PEP definition share the related information with the project team and stakeholders; Of course even the engineering should be informed of the risks, opportunities and goals of the project.
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What End User asks

- Good Engineering expectation
- Engineering calculation
- Standards & Rules
- Communication support

What End User gets

- Contract obligation
- EPC understanding
- Local Authorities requirement
- Project specification congruency
- Customer Best Practice
- Contractor understanding
- Sub vendors
- Local Laws & Norms
- Interpretations
- Field vincolous
- Misunderstandings
- Language translation

KROHNE

measure the facts

Associazione Italiana Strumentisti

ISA Section

Italy
What is the battery limit?

Engineering point of view requires the deep reading of all technical project specifications (process, mechanical, automation, ...) in order to:

- identify anything is required or needs to be included and do not forget anything is due
- guarantee the compliance with the project requirements
- put in evidence any “critical” issue or requirements to be engineered
- find evidence of all existing or potential limits, requirement and incongruencies in norms, laws and Standards applied
- highlight any potential deviations
- distinguish what is clearly not contractually due
What is the battery limit?

Project specification analysis from the Engineering is fundamental to PM to define the complete scope of work both in terms of technical and Contractual Term & Conditions.

PM will use the results of the Engineering analysis to evaluate any potential impact based on what is contractually agreed, expected from EPC, from Client, necessary to perform…in order to define with the contractor the effective scope of supply without any misunderstanding.
Analysis vincolous:

- Process data
- Ambient condition
- Space availability
- Utilities provided
- Mechanical requirement
- Instrument capability
- Performance requirement
- Local laws obligations
- Standards and Rules recommendations
- Customer Best Practice guideline
- ………
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Analysis vincolous:

• Instrument capability
Analysis vincolous:

- Pressure Loss
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Analysis vincolous:

- Wind and earthquake
- Stress Analysis
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• Analysis vincolous
  • Mixing verification with CFD simulation
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• Analysis vincolous
  • Space availabillity
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• Analysis vincolous
  • Accessibiity
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• Analysis vincolous
  • Logistic
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• Analysis vincolous
  • Transport and allocation
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Scope of Work

Feasibility
Preliminary Engineering Design
Engineering for Construction
Construction
Hand-over and commissioning

Progress (t, %)

Alto
Basso

Impact
Risparmio con la Value Engineering
GAIN
LOSS
Costo delle modifiche

Chiusura Brief
Chiusura Design

Conclusione

Avvio

KROHNE
measure the facts
Evidence of the work performed:

- Quality Plan
- Performance

Engineering shall provide documents, calculation report and/or integrate solution which could be needed to support and verify the quality and the performance agreed.
Evidence with documents:

Acceptance Criteria
Evidence with dynamic in house test:
Evidence
with test on site
if properly foreseen
by the engineering:
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Lesson & Learned
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