www.paolocalvano.com

ph.: +39 3490525008 +34 699147970

e-mail: info@paolocalvano.com

2021

Curriculum Vitae - PAOLO CALVANO

Personal details

Date and place of birth: April, 24 1965, Milan - Italy

Education: Mechanical Technician / Civil Works

Languages: Italiano – Español – English
Link: it.linkedin.com/in/paolocalvano/

Valid Visa Entry Russian Federation

I authorize the processing of personal data in accordance to the law

Professional

with extensive experience in large and medium international Companies in Operation and Commercial

- FEM (Field Engineering Manager) / Mechanical/Civil Field Supervisor/Advisor/Site Manager
- Construction Proposals Home Office Construction
- Construction/Project Engineer
- Cost/Proposals Engineer

The professional growth was focused on Projects as:

- AUM Ammonia Urea Melamine Complex Project
- Power Plants: Cogeneration Combined/Open Cycle Steam Gas/Oil-Coal; Waste to Energy; Biomass
- Wet/Dry Desulphurization retrofit FGD Plants from storage and preparation of reagent to end product
- Sulphur Recovery : Smelter Metallurgical Plants Refineries
- Solar Power Plants with solar boiler
- LNG Plants (Liquified Natural Gas): Terminal Treatment Storage Compression
- Air Quality Control Systems Plants Retrofit Environmental Plants (DeNOx, DeSOx, and ESP)
- Utility Boiler (Coal Gas/Oil) Critical and Supercritical Boiler with Ljungström
- Heat Recovery Steam Generator (HRSG)
- Petrochemical: separation treatment flashing
- Nuclear dismantling of radioactive liquid waste

Main positions carried out as part of my competences in EPC and C Companies:

- FEM (Field Engineering Manager)
- Home Office Construction
- Site Manager
- Construction Engineer / Mechanical Field Supervisor
- Cost Engineering Cost estimate Construction Estimator
- Claims and Changes Specialist
- Quantity surveyor
- Cost Analyst / Cost-plus contract
- Construction Proposal
- Mechanical Field Supervisor/Advisor in EPC contracts of packaged parts of plant
- Project Manager in EPC contracts of packaged parts of plant (lower 500tons)

Main activities :

(in company's headquarter or branch or in field)

- Field Engineering Manager Leadership of Field engineers on construction site;
- Home Office Construction Methodology and Cost Estimation
- Site Manager in Flue Gas Treatment (FGT System) Biomass Plant
- Analysis and use of Customer Specifications for each Project (ITB Tender Offer/Client's Contract)
- Cost Estimating and Budgeting of total job project new Plants and Revamping
- Cost/Price analysis including Cash Flow, Overhead & Profit
- Project lay-out definition and solutions
- Preparation of Mechanical Erection Guidelines/Procedure and Erection Sequence

- Team head in Feasibility and Constructability Plan looking Transport, Climatic and Environmental constrains; preparation of Job Cards per Item or Activity; scheduling per Capital Activities and WBS
- Direct Hiring Construction analysis including Direct Labour mix composition, Supervision and site Staff,
 Construction Equipment and consumptions, timing and scheduling, construction equipment hiring
- Analysis of Erection Production and Composite Rates by erection site locations for Construction Labour Productivity – Erection Standard Productivity to Erection Actual/Expected ManHours
- Study and analysis of Temporary Construction Facilities, Field Running Cost and Supervision
- Preparation of Mechanical Take Off and B.o.Q. (in case sizing) for Pipes & Piping, Steel Structures and Static Equipment
- Preparation of Mechanical Work Requisition and alignment of received offer
- Standardization of Mechanical Work Requisition for Plant or per Single large Item (Boilers, HRSG, Abosorber, Columns, Turbines and so on)
- R.f.Q. for Mechanical Equipment/Machinery/Bulk materials and analysis of technical/commercial offer
- Standardization of algorithms and Cost Estimating Relationship and Cost Drives
- Develop and maintain methods and tools
- Tutor of young employees and young graduates

Knowledge and Tools:

- Material selection according to Codes and Standards regulations (ASME EN JS– BS)
- GOST (Gosudarstvenny Standard) Russian Federation Codes, Standards and regulations
- Rostekhnadzor (RUS) russification
- ASTM ANSI ASME EN codes and standards
- API codes and KKS codes for process and WBS application.
- Literature of SMh Construction productivities (Standard Man Hours) and Man Power
- Literature of Compass and Global Construction Cost and Reference
- Literature of process design for Power Plant, FGD Plant, Steam Generator
- Sizing of pressure vessels and tank (ASME API PED)
- Process Piping Calculation ASME B31.1/B31.3 Power Piping transpose of Mollier Diagram in .xls file
 and also include Schedule thk. and all range thk. according to ANSI 36.10, ASME allowable stress from
 Carbon Steel to Alloy Steel (P91) materials
- Estimating steel structures and piperack weight calculation
- Various .xls tools for database, quantities generator (Painting / Insulation sq.m.), transport P.U. and packaging, shop rate production, Engineering Manhours estimation
- WFGD Absorber weight calculation from geometrical design including Steel Play Materials, erection and welding sequence, Rubber Liner Quantities and application list
- Direct Hiring cost calculation tool in .xls file including time schedule, 'S' Curve and ManPower histograms

Skills:

- field safety issues
- Problem solving and research
- Design to Cost/Target price
- Computer interfaces hardware and software Excellent knowledge of Excel, Word, Power Point, HTML and php, Comunication, Acad, SAP end-user, 3D Model

Personal publications:

- Project work as Tutor: (in Italian language final paper is 40)
 Methodology for the Estimation of Construction Activities of Process Plants
 MEC Master in Engineering and Contracting University Master's Degree
- Study of prototype of HRSG 26mt module tubes General Electric / C.M.I. / Tenaris
 Phase IV Construction Comparison Cost and Timing 21mt/26mt three different location for sub-Contract and Direct Hiring
- Methodology of Take Off Cost for Process Plant (under development)

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Certificates and Courses:

In force and contracted activities accredited by Ministry of Employment and Technological Development of the Andalucía's Boards – resolution 164/04 with the following:

- Job Security

- Ergonomics and Psycho-Sociology and Health Surveillance
- Industrial Hygiene

Training Certificates

- Rostekhnadzor (RTN) начальник проектировщиков А.1- Б1.14, Б8.26, Б1.11 (designers Head)— (RUS)
 Safety Industrial examination Chemical Plants and similar
- Prevention of Occupational hazard in Hot Work
- Work at Height
- Confined Spaces
- ATEX Zone
- Site Management Safety Training Scheme (SMSTS) expire 30.09.2021
- Medical certificate of fitness at date
- SARS-CoV-2 mRNA vaccine EU Covid-19 Certificate (1+1)

Experience

2021 - ПАО «Тольяттиазот» (TOA3 - TOGLIATTIAZOT)- Togliatti, Samara region – Russia Consultant at Casale Project (CZ)

FEM (Field Engineering Manager) and Supervisor for Revamping and construction of new urea plant with a design capacity of 2200 MTPD;

Leadership of Field engineers on construction site; the activities carried out focused on solving the problems of Field Engineering, Technical Queries, Site Instructions, Field Change Notes, Constructability issues and planning of erection resources with estimation of direct and indirect assembly manhours and to necessary construction equipment – Rostekhnadzor (RUS) Federal Service for Environmental, Technological and Nuclear Supervision – Engineering "russification" and GOST std.

2019/2020 - Метафракс Кемикалс» (Metafrax Chemicals)- Gubakha, Perm region – Russia Consultant at Casale Project (CZ)

FEM (Field Engineering Manager) and Supervisor for construction of new AUM (Ammonia/Urea/Melamine) complex plant with a design capacity of:

- 120 MTPD of melamine;
- 900 MTPD of ammonia;
- 1 255 MTPD of urea.

Leadership of Field engineers on construction site; the activities carried out focused on solving the problems of Field Engineering, Technical Queries, Site Instructions, Field Change Notes, Constructability issues and planning of erection resources with estimation of direct and indirect assembly manhours and to necessary construction equipment – Rostekhnadzor (RUS) Federal Service for Environmental, Technological and Nuclear Supervision – Engineering "russification" and GOST std.

Estimating Methodology for Construction Activities

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2018 - Consultant - Center Italy

Consultant for build-up the Home Office Construction

Preparation of standard Estimating Methodology for Construction Activities

- Construction Estimation work terminology
- Build up the estimation by category
- SDR Share of duties and responsibilities (di progetto e per subappalti)

- Cost Summary Sheet

- Cost allocation definition (CA-1 CA-6)
- Direct Manpower details (CA-1) (Manhours, mix and costs)
- Productivity factor details
- Direct Manpower vs Subcontract (CA-1)
- Indirect Manpower details (CA-2) (Manhours, nationality and costs)
- Industrial costs details (CA-3)
- TCF (Temporary Construction Facilities) and FRC (Field Running Costs) (CA-4)
- Provision of welfare facilities during construction work (CA-4)
- Minor Subcontracts details (CA-5)
- Supply and utilities details (CA-6)
- Construction equipment details (CA-4 and CA-5) (Asset / Rental)

Develop lifting and installation studies for heavy equipment or modules Develop of Construction Strategy and feasibility

2017 - REDECAM Group - Italy Milano - Cramlington Northumberland U.K.

Construction Site Manager

at Cramlington Biomass CHP Plant for **BWSC** (**Burmeister & Wain Scandinavian Contractor**) construction of Flue Gas Treatment System;

Site Management, Site Construction Supervisor;

Preparation of Construction "Job Cards" for Mechanical and Insulation including methodology of job execution and construction;

Risk Assessment Methods Statement supervision;

Progress meeting with Client;

Preparation of "Three Weeks Lookahead" - weekly construction program;

Safety

2015 - TERMOKIMIK Corporation - Italy Milano - Los Barrios Cadiz Spain

Construction Supervisor in Mechanical and Civil discipline at:

Los Barrios - Cadiz - Spain - Construction of Retrofit Environmental Plants DeNOx

Los Barrios Power Plant (E.ON / Viesgo) - Hard Coal Fired Unit 590MW

SCR – Selective Catalytic Reduction Implementation Plant

Preparation of Construction "Job Cards" for Mechanical and Civil discipline including client's approval, methodology of job execution and construction supervision; also includes the survey on the existing plant and design of feasibility on the existing Power Boiler for tie-ins of piping routing, steel structures main, secondary and services.

2014 - Hitachi / Gicotecnica Milano – Jazan Project

Consultant for Project Execution Documents of EPC phase Constructability Concepts

Refinery and Marine Terminal at Jazan - Saudi Arabia

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2013 - O.M.A. Group – Italy Pescara

Consultant in Operation department as:

Construction Proposals for

- Saipem landfall and pipeline construction (pigging lines) RUSSIA- ANAPA
- Aster Termomeccanica

Budowa Zakładu Termicznego Przekształcania Odpadów Komunalnych dla Bydgosko-Toruńskiego Obszaru – Metropolitalnego – Poland

- Saipem IVAR AASEN T&I PROJECT Fabrication of Spreader Bar and Rigging Platform
- Saipem Construction of the suction pile foundations SiRCoS for South Stream
- Saipem West Kuwait Saipem Project West Kuwait (BS-171)- new gas booster stations

2011 - TECHINT Engineering & Construction – Italy Milano – Egypt El Cairo

Consultant in Operation department as:

Constructability Team Head

Construction Engineer / Construction Cost Engineer

Claims and Changes Specialist on revamping

Quantity surveyor

Work Requisition Standardization and Quantity Price List

Feasibilities Study Direct Hiring Proposals

I have also contributed to the prototype studies of HRSG having 26 meters length Module Tubes working directly with Tenaris and General Electric.

I tutored young employees for the Company in apprenticeship.

2008 - ANSALDO CALDAIE – Italy Gallarate VA

in Proposal department my duties were to prepare overall construction and material costs, Erection Procedure and Guidelines on Utility Boilers, Spiral Coal / Oil; Box Oil / Gas - critical and supercritical.

2006 - <u>SIIRTEC NIGI – Italy Milano</u>

Consultant in Operation department as Project Engineer, Technical Advisor, material co-ordinator, Procurement and Shipping in a termination of EP Sulphur Recovery Project in Kazakhstan;

In the Commercial and Operation department as Manager of Subcontracting of EPC contracts.

Cost Estimator of overall total project plants and deal in the preparation of requests for tender for all disciplines. I interfaced and transfer my report directly to the Executive Branch.

Tutorship to young graduates

2005 - GENERAL MONTAGGI – Italy Milano / Roma / Napoli

Proposal Manager for Direct Hiring Proposals

1995 - ABB / ALSTOM POWER – Italy Milano

Senior Cost Estimator and Proposals - Technical and Commercial - Coordinator of estimating department. During the first two years, I was in the commercial office of the Power Generation Department, followed the estimation mainly for mechanical optimizing costs and drawing up the sale price. I worked in a number of Tenders and Feasibilities for the Italian and foreign markets.

In the ECS (Environmental Control System) division as coordinator of the multidisciplinary estimates and Construction Guidelines prevalently on Wet Flue Gas Desulfurization (WFGD) Plants, also the systems of Integrated Dry Desulfurization (NID) and Waste to Energy (WtE).

Bidding and follow-up activity on the operation project in the executive phase for a Wet Flue Gas Desulphurisation plant in Thailand, Mae Moh. Looking suppliers and sub-contractor in local market for

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execution of part of plant. Preparation of Mechanical Material Take Off and B.o.Q. for Piping, Steel Structures and Static Equipment

Preparation of Mechanical Work Requisition and alignment of received offer.

For many bidding phase I've research suppliers of material and Sub-contractor for erection activities in local market as WFGD Plants in Bulgaria (Marica), Portugal (Pego), England (Cottam in Consortium), Turkey (Kangal), Slovenia (Sostanj), Brasil (Jacui in Consortium), Hungary (Orozlany) and site survey for the revamping in Fusina Italy and Erection manpower production in the execution of construction in Florina (Greece).

In ABB USA (Knoxville) headquarters, I attended the Technology Transfer seminar to the Wet Flue Gas Desulfurization (WFGD) process, estimation and costing and erection procedures and guidelines.

I built a computer tool system receiving process data that is able to produce the dimensional, weight, cost and erection ManPower development of the Absorber and other static Equipment.

1990 - FOSTER WHEELER – Italy Milano

Fiat Avio Foster Wheeler Energy company founded in 1990 to combine the resources of both technologies.

I prepared the coding and standardization of piping materials, valves and specification.

I followed the feasibility studies from preparation of layout to estimate costs.

In 1992, I was responsible of Cost Estimating department of Power Plant Projects.

1989 - Snamprogetti/Agip – Italy Milano

Consultant for EPC petrochemical packages as Project Engineer, Construction Supervisor and Inspector, planning, budgets cost and procurement.

1988 - BGMB – Italy Milano/Bergamo

Drafting Construction Engineer, Quantities Surveyor, Cost Control and Cost Estimation plant skids and prefabricated modules and components for the petrochemical and power industry.

I've converted the Disneyland's rollercoaster steel structures American shapes to European norms for Paris Location.

1986 - METANO IMPIANTI - Italy Milano

as Workshop Manager, Cost Estimator, Construction Engineer, Site Supervisor, Workshop and site inspector for the construction of Natural Gas Plant and Gas Treatment Equipment as Pipelines, pipeline pig launchers and receivers.

Mechanical Supervisor installation and testing of Natural Gas Compression Station, Natural Gas Pressure Reduction and Measurement station and for feed Natural Gas line to Gas Turbine in Fiat Mirafiori factory.

Projects

2021 - Field Engineering Manager

- for Revamping and construction of new urea plant with a design capacity of 2200 MTPD; Togliatti, Samara region – Russia

2019/2020 - Field Engineering Manager

- for construction of new AUM (Ammonia/Urea/Melamine) complex plant with a design capacity of :
 - 120 MTPD of melamine;
 - 900 MTPD of ammonia;
 - 1 255 MTPD of urea.

Gubakha, Perm region - Russia

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2018 - Construction Proposals for:

- ENI SANNAZZARO de BURGONDI Refinery REBUILDING EST
- CCPP 250MWe Yerevan Armenia
- ENI Cassiopea Compression Station

BWSC (Burmeister & Wain Scandinavian Contractor) Cramlington Biomass CHP Plant for BWSC (Burmeister & Wain Scandinavian Contractor) construction of Flue Gas Treatment System - 800tons

Cramlington - Northumberland - U.K.

TERMOKIMIK CORPORATION

Los Barrios – Cadiz - Spain Construction of Retrofit Environmental Plants DeNOx Los Barrios Power Plant (E.ON / Viesgo) - Hard Coal Fired Unit 590MW SCR – Selective Catalytic Reduction Implementation Plant

Hitachi / Gicotecnica Milano – Jazan Project

O.M.A. Group - Italy Pescara

- Saipem landfall and pipeline construction (pigging lines) RUSSIA- ANAPA
- Aster Termomeccanica
 - Budowa Zakładu Termicznego Przekształcania Odpadów Komunalnych dla Bydgosko-Toruńskiego Obszaru Metropolitalnego Poland
- Saipem IVAR AASEN T&I PROJECT Fabrication of Spreader Bar and Rigging Platform
- Saipem Construction of the suction pile foundations SiRCoS for South Stream
- Saipem West Kuwait Saipem Project West Kuwait (BS-171)- new gas booster stations

TECHINT Engineering & Construction

- Russian Federation Siberia Norlisk Nickel **Constructability Plan** Front End Engineering Design (FEED) Reconstruction of elementary sulphur production of Copper Plant
- El Ameria Egypt **Direct Hiring** CCPP EPC Project
- South Helwan Egypt PGESCo CP-106- Supercritical T. P. P. (Units 1,2 &3) N° 3 Steam Turbine Generators Steam Tube Condensers Auxiliaries
- Suez Egypt PGESCo CP-118 Direct Hiring Supercritical T.P.P. 1 x 650MW Gas/Oil Fired Boiler
- Saluggia Italy- CEMEX Eurex Plant Ele/Mec Nuclear dismantling of radioactive liquid waste
- El Seyouf Egypt **Direct Hiring** Fast Track 3xGT13E2 Alstom Power EPC
- Varsavia Poland Ele/Mec Erection Fiat Avio Polonia Aero Cold Flow Turbine Test Facility EPC
- PKN Orlen Poland -
- Rotterdam Netherlands Vopak Gasunie Ele/Mec Erection Gate terminal revamping/Expansion LNG
- Al Anbar Iraq Ele/Mec Erection CCPP Power Plant 2X 800 MW
- Evergem Belgium- Nest Energie Ele/Mec Erection 800-970MWe Combined Cycle Gas Turbine EPC
- Kirklareli, Turkey Sedko Urundul Enerji Ele/Mec Erection CCPP 430 MWe -- Turkey EPC BoP
- Onne Nigeria Indorama Direct Hiring IEPL Onne Port Project Multi-Purpose Terminal- EPC
- Dairut Egypt EDF/Edison **Direct Hiring** 3*750MWe Combined Cycle Power Plant
- Zeebrugge Ele/Mec Erection LNG Plant EPC

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ANSALDO CALDAIE

- Porto do Acu (Spiral Coal) 525MWe Turn Key Brazil
- Sokhna (Spiral Oil) 650MWe Turn Key Egypt
- Hassyan (Box Gas/DieselOil) 250MWe Turn Key
- Abu Qir (Box Oil/Gas) 650MWe Turn Key Egypt
- Jindal (Spiral Coal) 660MWe Turn Key India
- Barrancones (Coal) 350MWe Coal Turn Key Chile
- Barrancones (Coal) 250MWe Coal Chile
- Torre Valdaliga Sud 350MWe Coal Repowering unit 4 (TV7) IT
- Vado Ligure 460MWe Coal IT
- Ivenpah Solar Boiler 100MWe Solar (Prototype solar boiler)
- Krishnapatnam 660MWe Coal India
- Yuma USA 250MWe Natural Gas
- Bulk Supercritical 660MW India
- Red Dragon 350 MW Chile

GENERAL MONTAGGI

- Linate Airport Italy Commissioning Italia CCPP Mechanical Erection
- Geregu Nigeria Siemens GTPP Mechanical Erection of 3 GT V94.2 and Aux.
- Gioia Tauro Italy BFB Boiler/ Slovenske Energeticke Strojarne /Transelektro Mechanical Erection 2x Steam Boiler
- Sparanise Italy Ansaldo Caldaie Mechanical Erection horizontal HRSG
- Teverola Italy General Electric EMEI Erection GE Fr. 9FA GT/GE A15 ST- CICO
- Santa Barbara Italy ENELPOWER- Mechanical/Electrical Erection- GT e Generator
- Turbigo 800 Italy- Techint- Disassembly and conservation 4 GT 50 + ECO + Diverter
- Lomellina Energia Alstom Power Mechanical Erection WtE
- Lomellina Energia Italy Foster Wheeler Mechanical Erection- Steam Boiler- RRP
- Modugno Italy Alstom Power Mechanical Erection -GT & Gen./ST & Gen/HRSG/Heller Cooling Sys./KA26-2 GT CCPP
- San Filippo del Mele Italy Fisia Italimpianti Mechanical Erection WFGD
- Aprilia/Turano Lodigiano Italy Techint Mechanical Erection BOP + Aux/ 2x GT 250MW each/1 ST 270 MW/Air Condenser/2x HRSG Horizontal and Stacks / 3 Generators Hydrogen Cooled CICO

ABB/ALSTOM POWER

- Ye Long Taiwan PP 1995 ÷ 1997
- Takoradi Ghana CCPP 1996
- Quinbei China PP 1997
- Los Barrios Spain WFGD 2005
- Carboneras Spain WFGD 2004
- Shoaiba Saudi Arabia PP + FGD 1997 ÷ 1999
- San Mateo Philippine WtE 2001
- Mae Moh Thailand WFGD 1996 ÷ 2004
- Sostanj Slovenija WFGD 1998
- Maritza Bulgaria –WFGD 1999 ÷ 2005
- Kangal Turkey WFGD 2001
- Elbistan Turkey WFGD 2000
- Orozlany Hungary WFGD 2001
- Ruttemberg Israel WFGD 1999

- Jacui Brasil WFGD 2001
- Alma Petroli Ravenna Italy WFGD 2002
- Brindisi Nord Italy SCR 2003
- Amager Danimark WFGD 2003
- Cottam U.K. WFGD 2001 2002
- Elektrenai Lituania FGD 2005
- SNET France 2 FGD 2003 ÷ 2005
- Pego Portugal WFGD
- Boa II Germany WFGD
- Hai Phong Vietnam WFGD
- Torrevaldaliga Nord Italy WFGD 2004
- Stongoli Italy Biomass 2001
- Florina Greece PP+WFGD 1996 ÷ 2004

Some places in the world that I have visited both for business and for tourism:

- Yaroslavl' Russian Federation (from 2015 every year)
- Gubakha Perm region Russian Federation 18 months
- Tolyatti Samara region Russian Federation 18 months
- Sydney, Brisbane Australia 5 months
- São Paulo Brazil 30 days
- Knoxville USA 30 days
- Bangkok, Bang Chang Thailand 2 months
- Ungeria (in search of sub-contractors) all 30 days
- Bucharest, Brasov, Arad, Timisoara Romania 30 days
- Slovenia all 30 days
- Croatia all 30 days
- Czech Republic Prague and Bohemia 20 days
- Ankara, Istanbul Turkey 30 days
- York, Newcastle, London UK 40 days
- Maritza, Stara Zagora, Sofia, Ruse Bulgaria 30 days
- Southern France all
- Southern Spain throughout
- All of Switzerland
- Amsterdam and neighboring 30 days
- Thessaloniki, Florina, Alexandropolis Greece 45 days
- Dubai UAE 10 days
- Kuala Lumpur Malaysia 10 days
- Cairo Egypt
- Germany various locations
- Throughout Italy

Construction literature for reference:

- J.A. Bent, A. Thumann, "Project Management for Engineering and Construction"
- A. Zucconi, "Construction standard manhours: un unico parametro per l'attività di cantiere"
- E. Cagno, F. Caron, M. Mancini, "Cost Estimation of Indutrial Risk in the Bidding Process",
- M. Titolo, "La competizione internazionale nel mondo dell' impiantistica", Franco Angeli, Milano 2005
- J.S. Page, "Conceptual Cost Estimating Manual", Gulf Publishing Company, Houston (USA)
- M. D' Adda, "Fixed capital cost estimating", Elsevier Science BV, Burlington (USA) 1997
- Total Cost Management Framework An Integrated Approach to Portfolio, Program, and Project Management 2012 AACE® International
- Compass International Global Construction Cost and reference Yearbook
- Constructability Working Practice Value Enhancing Practice B. Manoli Techint
- Construction Industry Institute Constructability Improvement during Engineering and Procurement