Presentation of

Mechanical Installation, Commissioning, Maintenance & “Turnkey” Solutions for Industrial Plants, Combined Cycle Power Plants and Solar Thermal Power Plants
Services Performed by SMIT Ingeniería S.A.

• Installation & alignment of pillars and collectors in the solar field & Installation of Control Boxes and Commissioning of the hydraulics drives (4 different types)

• Commissioning of the Solar field parabolic trough with Flagsol GmbH, Schott & HIDRASA and SENER and also Heliostats with SENER at Gemasolar

• Mechanical, electrical and I&C commissioning of Solar Thermal Plants or Power Islands including Control Room & Shift Operators (procedures available)

• Installation of Power Islands e.g. Steam Turbine or Gas Turbine, Generator, Condenser, Transformers - mechanical installation, commissioning or complete turnkey

• Installation of several HTF thermal oil boiler plants – HTT (gas fired once through boilers)

• Installation and commissioning of the Salt Melting Plant for Thermal Salts in cooperation with different suppliers - 30.000t of salts melted in less than 2 months > to date more than 220.000t of salts molten with improved schedule

• With a consortium SMIT / supplier, we can deliver liquid salts as turnkey solution into the tanks of the customer in guaranteed time frames
Services Performed by SMIT Ingeniería S.A.

- Installation of BOP equipment (boilers, pumps, heat exchangers, demin. water plants etc.)
- Commissioning of Equipment with OEM’s (Sulzer, KSB, Ingersol, Veolia, H+E etc.)
- Cleaning & flushing Services with SIGMA Commissioning™ in Alliance with BES&T in Combined Cycles and Solar Thermal Power Plants
  > froth flushing™ of HTF system (experience of Kramer Junction & approved by Dow)
  > froth flushing y SIGMABlow™ for water / steam systems using minimum amount of water
    SIGMA Commissioning™ with reduction of 95% of the water consumption
    and no chemical waste water generation
  > reduction of critical path schedule in commissioning by several weeks (SOLNOVA)
- Maintenance, Repairs works and Shift Operation Services for Solar & Conventional Plants
  - Operations & Maintenance Training (hand on & procedures)
- Actually SMIT is involved in the installation and commissioning of over 1050 MW in renewable energy projects
- In our group we have more than 200 professionals working on power generation projects in Spain, Europe and on an international platform with our alliance partners
Solar Thermal Power Plant

Installation & alignment of Pillars and SCE´s Collectors in the Solar Field of several CSP 50 MW Projects

- in the first plants Andasol 01/02 & Extresol and Andasol 3 with a reduction of schedule and costs of more than 30%

Electrical & I&C installation and commissioning of the 2600 Heliostats at Gemasolar – 19 MW

- full I&C commissioning & maintenance support of the CSP plant
- turnkey salt melting service (8000 t) and consulting support
Installation, Alignment & Commissioning of the Steam Turbine & Power Island (20 MW) (2 x15MW)

- at PS-20 ABENER - full “turnkey” scope for Franco Tossi Meccanica
- at Novatec Fresnel 30 MW project (2 x 15 MW GE Thermodyn)
Installation, Alignment & Commissioning of the Steam Turbine & Power Island (50 MW Siemens)

- at Solnova and other ABENER sites in “turnkey” including heavy lifts plus 350 T
Outages, Inspection & Overhauls for Turbines & Generators, Diesels & Compressors
- for Siemens, GE, MAN Turbo, Franco Tosi and others
M- & E-, Installation, Permitting & Commissioning of the HTF oil Boilers from HTT energy systems at Solnova sites

6 times 23 MW thermal load

Service & Installation works with HTT in Spain on several solar projects
M- & E-, Installation, Permitting & Commissioning of the salt melting plant

Logistic & Supervision during the melting process
<2 months 30,000 t of salts at 380ºC in 24 hrs operation
- more than 220,000 tons of salts molten to date

Consortium option to supply full “turnkey service” for liquid salts storage solutions
Installation & Commissioning of BoP Equipment: pumps, filters, heat exchangers etc.

- for Sulzer, SWAN, GEA, KSB, Lointek, Foster Wheeler and others
Fully Equipped Tool Containers for Installation, Commissioning & Outage Works - Special Tools for Gas & Steam Turbines

- service agreements with HYTORC, Eurogruas, Grúas Lozano,
- mechanical tooling for onsite turbine works & access to turbine repair shop
- Bilfinger Industrial Services, Kaefer, Applus Norcontrol, SGS
> to support your turnkey works & outages
SMIT Ingeniería SA has a service center in South Spain for Turbines, Combined Cycle & Solar Power Plants

SMIT has shop facilities of 2000 m², with 20 T overhead cranes & workshop for outage & service works and Logistics Center – South Spain

In our group, we are performing the maintenance of CSP & combined cycle plant, with Siemens, Abengoa, Torresol Energy and other Utilities

With our international alliance partners we can supply qualified staff for projects on an international platform and offer service to power industry on the full supply chain

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