

MAIN WORKS

We perform engineering, consultancy, design and management service within the environmental and sustainable energy field.

2017 Kwinana - Perth - Australia

Basic Engineering for the construction of WtE plant



ACCIONA Industrial S.A. will participate to the tender for the construction and operation of a Waste to Energy plant in Kwinana (Perth – Australia).

The WTE plant consists in two incineration lines 25 t/h each. The total annual treatment capacity is 400.000 t/y with 36 MWe of power generation.

The process line will consists in: waste receiving pit and building, feeding system to the furnace / furnace equipped with air cooled grate firing system / ashes handling system / horizontal heat recovery boiler / flue gas treatment / thermal cycle equipped with condensation steam turbine, generator and air condenser / substation HV / auxiliaries and ancillaries systems to balance the complete EPC and operation of the plant.



MAIN DATA	
Number lines	2
Grate typology	water cooled moving grate
MSW/RDF capacity	400.000 t/y
Range PCI	7.000 ÷14.000 kJ/kg
Design PCI (NCR)	10.100 kJ/kg
Capacity line (each)	25.000 kg/h
Thermal capacity of combustion chamber	2 x 70 = 140 MWt
Power capacity	36 MWe
Сарех	work in progress

2016 Barrio Villa 31 - BUENOS AIRES - ARGENTINA

Feasibility Study & Preliminary Design of MBT & WtE Plant



Feasibility study and Preliminary design, related to the development of the Construction and Operation of MBT and WTE facility. MSW: 18.000 ton/year Electrical power capacity: approx. 0,7 MWe



2016 BUENOS AIRES - ARGENTINA

Preliminary Design WtE Plant (Alternative 1 - Parque Roca / Alternative 2 - Port of B.A.)



Feasibility Study and Preliminary Design is oriented to fix the main and preliminary data for design, erectio, testing, start up and operation of a Municipal Solid Waste (MSW) Waste to Energy plant (WtE) to be located in the City og Buenos Aires in two different possible locations: Parque Roca "Villa Soldati" area and the port of Buenos Aires.





MAIN DATA	
Number lines	3
Grate typology	air cooled moving grate
MSW/RDF capacity	936.000 ton/a
Range PCI	6.700 ÷ 9.600 kJ/kg
Design PCI (NCR)	7.950 kJ/kg
Capacity line (each)	40.000 kg/h
Thermal capacity of combustion chamber	3 x 99,4 = 298,2 MWt
Power capacity (air/water condenser)	69,3/68,2 MWe
Capex (air/water condenser)	work in progress





2016 BENCHMARK

Case Study

Comparing for a new WtE's project in LATAM Country and 40 WtE plants constructed or under construction in Europe, Asia and north America.

The definition of the economic aspects of the energy recovery from waste (investment costs, operation costs and revenues) is, therefore, affected by several factors (plant capacity, kind of waste, modality and extension of the energy recovery, financial incentives, plant availability) which are extremely variable as function of the actual situation where the plant will be set up. Notwithstanding the above limits, through the analysis and elaboration of the available data concerning 40 installations all over the world (Europe, Asia, North America), we tried to get a parametric evaluation of the investment and operation cost (as well as revenues) connected to the construction and operation of such kind of plants.

The results we have obtained make available the necessary elements for a preliminary evaluation of the economic aspects connected to the energy recovery from waste as function of the amount of treated waste and the thermal capacity of the pants included in the data base. To ascertain the validity of an investment is a necessary pre-condition but not sufficient in order to get a good result that can be guaranteed only when it can be reasonably demonstrated that the relevant costs are competitive with others arising from alternative solutions.

In order to verify such validity is, therefore, appropriate to carry out a comparison with other solutions already adopted in the market, with reference to:

- 1. The total investment (CAPEX)
- 2. The yearly capacity of treated waste
- 3. The power production.

The Benchmark is done by selecting a set of indexes, each of them quantified and measurable, which are objective, understandable and representative of the technical and economic process to be compared. The selection of the critical process and the relevant key indexes of performance ends with the verification of the positioning where these dimensions are evaluated for all the indexes. The benchmark model includes the evaluation of each plant through the analysis of the main operation performances. The homogeneity of the sample is represented by the fact that all of them use the same combustion technology (grate combustion technology).

The main indexes considered in the study are the following:

- 1. Amount of waste yearly treated
- 2. Thermal capacity
- 3. Number of combustion lines

4. Thermal capacity associated with the number of lines

For the kind of considered plants, we show the economic information relevant to costs and elaborated according to the following criteria:

a) Parametric costs as function of the thermal capacity; in addition to the total economic values, we report also the unit values (total value/thermal capacity) in order to directly compare plants having different sizes or different types.

b) Parametric cost as function of the yearly capacity in terms of amount of waste treated; in addition to the total values we report also the unit values (total value/yearly amount o waste).

Method

The database has been prepared through the collection and organization of the following information:

- 1. Year of construction starting
- 2. Place and Country of location
- 3. Yearly capacity expressed in tons/year
- 4. Number of combustion lines
- 5. Treatment capacity of each line expressed in ton/hour
- 6. Thermal capacity (MWt)
- 7. Electric power produced (gross) MWe
- 8. CAPEX at the time and currency of construction starting
- 9. CAPEX in Euro at year 2015
- 10. CAPEX of civil Works and percentage of the total investment
- 11. CAPEX of electromechanical works and percentage of the total investment
- 12. Ratio between CAPEX for electromechanical works and thermal capacity expressed in Euro/ MWt representing the unit investment cost per MWt of the electromechanical works
- 13. Ratio between total CAPEX and thermal capacity; it represents the investment cost per MWt
- 14. Ratio between total CAPEX and yearly capacity; it represents the investment cost per ton of waste
- 15. Name of constructor/technology provide

2016 Limassol - CIPRO

MBT Plant: mechanical and biological treatments; biogas production, fianl landfill disposal



Scope of Work: Owner's technical assistance (Supervision on design review, support during the preparation and issue of the Request of Proposal to suppliers; technical and economical alignment and negotiation with suppliers on proposal received).Expediting and Check during production and test phase on Supplier workshop. Support during commissioning Phase. Mechanical & electrical engineering supervision, site & supervision assistance in erection and startup phases of the plant.

Type of plant: Mechanical Biological Treatment Capacity: 140.000 Ton/y Kind of waste: Municipal Solid Waste (mixed) Power production (biogas from anaerobic digestors): ÷2 MWe

The plant is composed by three different sections:

- Sorting of mixed MSW
- Anaerobic Digestion of the separated organic fraction
- Sanitary Landfill for residues



2015 Trajouce - Portugal

Feasibility Study and Preliminary Design



Feasibility Study and Preliminary Design for a WtE plant in Trajouce, Portugal.



MAIN DATA		
Number lines	2	
Grate typology	air cooled moving grate	
MSW/RDF capacity	200.000 ton/y	
Range PCI	7.500 ÷15.000 kJ/kg	
Design PCI (NCR)	11.000 kJ/kg	
Capacity line (each)	12.800 kg/h	
Thermal capacity of combustion chamber	2 x 39,2 = 78,4 MWt	
Power capacity	20 MWe	
Сарех	work in progress	



2015 MEXICO CITY

Preliminary Design WtE Plant



Preliminary Design for erection, testing, start up and operation of a Municipal Solid Waste (MSW) Waste to Energy Plant (WtE) to be located in Mexico City.



MAIN DATA			
Number lines	3		
Grate typology	air cooled moving grate		
MSW/RDF capacity	936.000 ton/y		
Range PCI	7.500 ÷11.700 kJ/kg		
Design PCI (NCR)	9.625 kJ/kg		
Capacity line (each)	40.000 kg/h		
Thermal capacity of combustion chamber	3 x 107 = 321 MWt		
Power capacity	87 MWe		
Сарех	work in progress		



2015 DJELFA - Popular Democratic Republic of Algeria

Feasibility Study and Final Design WtE Plant



"Design, Management and Supervision of the Construction concerning a WTE plant for Djelfa Province" - Wilaya de Djelfa

In Joint Venture with ICARIA srl, P&W got a contract dealing with:

- FEASIBILITY STUDY: waste analysis and needs evaluation, assessment of the current environmental status;
- FINAL DESIGN: of the WTE plant (Etude d'Exécution);
- TENDER PREPARATION: of the necessary documents to issue an international tender for its construction;
- DURING CONSTRUCTION: check and approval of documents prepared by Contractor, supervision
 of the site works, quantities survey, assistance to commissioning, start up and tests (owner engineering).



2014 TARANTO - ITALIA

Consulting for WtE Plant Revamping



Technical and administrative consulting for the maintenance activities definition and design, to improve the plant reliability and efficiency.

A Technical analysis has been carried out highlighting the key components needing substitution and/or revamping, as well as an economical evaluation and an administrative guidelines in order to fix a tender procedure.

MAIN DATA	
Number lines	2
Grate typology	air cooled moving grate
MSW/RDF capacity	73.000 ton/y
Range PCI	7.000 ÷10.400 kJ/kg
Design PCI (NCR)	8.100 kJ/kg
Capacity line (each)	4.600 kg/h
Thermal capacity of combustion chamber	10,5 MWt
Power capacity	3,7 MWe
Сарех	7,5 ML euro









2014 ALGER - République algérienne démocratique et populaire

Feasibility Study and Final Design



"Design, Management and Supervision of the Construction concerning a WtE plant for Algiers Province" - Ministry of Environment and Territory.

In Joint Venture with ICARIA srl, P&W got a contract dealing with:

- FEASIBILITY STUDY: waste analysis and needs evaluation, assessment of the current environmental status;
- FINAL DESIGN: of the WTE plant (Etude d'Exécution);
- TENDER PREPARATION: of the necessary documents to issue an international tender for its construction;
- DURING CONSTRUCTION: check and approval of documents prepared by Contractor, supervision of the site works, quantities survey, assistance to commissioning, start up and tests (owner engineering).



2014 ANNABA - République algérienne démocratique et populaire

Feasibility Study and Final Design



"Design, Management and Supervision of the Construction concerning a WtE plant for Algiers Province" - Ministry of Environment and Territory.

In Joint Venture with ICARIA srl, P&W got a contract dealing with:

- FEASIBILITY STUDY: waste analysis and needs evaluation, assessment of the current environmental status;
- FINAL DESIGN: of the WTE plant (Etude d'Exécution);
- TENDER PREPARATION: of the necessary documents to issue an international tender for its construction;
- DURING CONSTRUCTION: check and approval of documents prepared by Contractor, supervision of the site works, quantities survey, assistance to commissioning, start up and tests (owner engineering).



2013 BUENOS AIRES (Avellaneda) - Argentina

Feasibility Study and Preliminary Design WtE Plant



Feasibility Study and Preliminary Design for a WtE plant in Avellaneda, Buenos Aires.



MAIN DATA		
Number lines	1	
Grate typology	air cooled moving grate	
MSW/RDF capacity	150.000 ton/y	
Range PCI	6.300 ÷11.000 kJ/kg	
Design PCI (NCR)	8.000 kJ/kg	
Capacity line (each)	19.000 kg/h	
Thermal capacity of combustion chamber	42,7 MWt	
Power capacity	11 MWe	
Сарех	work in progress	



2013 Lotto 6 Collette Ozotto - IMPERIA

Balefill and MBT Plant - Final Design / Constructive Design



Final, Constructive Design of a new balefill for the disposal of the MSW produced in the Imperia Province over the years 2015-2018. The project includes the aerobic treatment of parts of the biodegradable material as well as the separation of ferrous materials by magnets; before disposal the MSW are pressed and bailed.

- Total volume of the landfill around 378.000 mc
- MBT plant treating around 102.000 t/y
- Main outputs:
 - electric energy (photovoltaic system

power production 49,70 kWp)

- cogeneration plant (landfill gas power production 2 x 330 KW forecast)
- recyclable metals (ferrous materials)
- recyclable R5 (electric and electronic equipment)
- Service provided:
 - final and constructive design
 - preparation of documents for permitting (AIA authorization and fire prevention)
- Investment: 20 Euros/millions
- Operating from August 2016



2013 COSTA RICA

Feasibility Study and Preliminary Design WtE Plant



Feasibility Study and Preliminary Design for a WtE plant in Alajuela, Costa Rica.



MAIN DATA

Number lines	2
Grate typology	air cooled moving grate
MSW/RDF capacity	550.000 ton/y
Range PCI	6.300 ÷11.000 kJ/kg
Design PCI (NCR)	8.000 kJ/kg
Capacity line (each)	35.000 kg/h
Thermal capacity of combustion chamber	2 x 78 MWt
Power capacity	40 MWe
Сарех	work in progress

Diagramma di combustione (Atteso)



2012 MACOMER - Zona Industriale Tossilo (NU) - ITALIA

Final Design WtE Plant



Final design for Tender participation concerning the Construction and Operation & Maintenance (Project Financing) of a new WtE plant.

MAIN DATA

Number lines	1
Grate typology	water cooled moving grate
MSW/RDF capacity	65.000 ton/y
Range PCI	9.200 ÷18.800 kJ/kg
Design PCI (NCR)	13.200 kJ/kg
Capacity line (each)	7.600 kg/h
Thermal capacity of combustion chamber	28 MWt
Power capacity	6,7 MWe
Capex	48 ML euro





2012 Ca' del Bue - VERONA- ITALIA

Revamping TMB and fluidized bed section Preliminary & Final Design



Revamping of existing MSW plant.



Plant section 1 MSW treatment for recyclables recovery and Refuse Derived Fuel production

- Capacity 156.000 ton/y of MSW
- Recyclables recovery 5000 ton/y (from MSW)
- RDF production 40.000 ton/y

Services provided are:

- New system design
- Performance evaluation
- Equipment specifications
- Cost estimation
- Feasibility study
- Preparation of documents for permitting

Description: The plant receives residual Municipal solid waste and not hazardous special waste providing their mechanical separation for the recovery of:

- Plastic containers (HDPE, PET)
- Ferrous metals
- Nonferrous metals

Along with the production of RDF to be used as energy source.

The revamping dealt with a new process design (due to the change of treated materials) with substitution of most of existing equipment.

The new process is composed by three different lines (connected among them) in order to be able of treating a large quality range of fed materials; depending by its characteristics the waste can be addressed to the proper treatment line to maximize the "reusability" of the materials.

One among the lines is dedicated to treatment of special not hazardous waste having high content of recyclables and, through manual selection, is possible to recovery up to 60-70% of the incoming material.

Investment: 5.000.000 €





Plant section 2 - anaerobic digestion of organic separated waste & biomass energy production (by biogas of digestors)

- Type of material
- Waste capacity
- Number of lines
- Power capacity
- Total investment
- Type of power generator

Services provided:

- Design for tendering purposes including:
- System design
- Equipment specifications
- Plant layout and elevations
- Performances definition
- Cost estimation
- Constraints analysis
- Reporting
- Environmental Impact Assessment (EIA)

Description: In the framework of the rehabilitation of the environmental facilities already present within Ca' del Bue complex, the Anaerobic Digestion plant has been renovated due to change of the feeding material and technological update need. The new system is fed with biodegradable fraction of MSW coming from separated collection. The pretreatment process as well as the concept design of digesters have been completely modified; other modifications have been done to the following sections:

- Digestate dehydration system
- Digesters feeding pumps
- Exhaust air treatment (biofilter and scrubber)
- Gas holder and cogeneration system

- FORSU Biodegradable MSW fraction
- 40.000 tons/year
- 2/1 lines (1 spare)
- 1 MWe (gross total)
- 8.000.000 € (around)
- Engine driven generator

2012 Imperia - ITALIA

MBT Plant: mechanical and biological treatments Final Design - Project financing - work in progress



Final Design of MBT Plant and auxiliary landfill for MSW treatment and disposal. Feasibility study & Final design of the waste separation and pre-treatment plant (103.000 t/year MSW, 13.000 t/year green waste and 6.000 t/year sewage sludge)

- The landfill capacity is 1.000.000 t (20 years)
- Main outputs:
 - Electric energy (production of 2 MWe by bio digestor biogas)
 - Recyclable plastics
 - Recyclable metals
 - Plasmix
 - RDF
 - Recyclable paper
 - Compost (I and II quality)
- Services provided are:
 - MBT plant design
 - Landfill design
 - Business plan
 - Feasibility study

• Description: The new unit will serve the Imperia Province by treating residual MSW produced within the subject area. The system design has been focused on material recovery and energy production through Anaerobic Digestion of the biodegradable material (2 MWe).

• The system must maximize the material recovery and RDF production has to be intended as less preferred option. The "Plasmix" is a mix of plastics (once recovered HDPE and PET bottles) that may be reused for the production of secondary plastic goods such as: plastic container for vegetables and fruits, vases for flowers growing, pallets, and so on.

• The unit can accept biodegradable material from separated collection that will be treated separately. The Anaerobic Digestion process takes place in closed cells without additional water (dry process); even the aerobic process takes place in closed cells.

• Investment: 71 euro/millions.

2011 - 2013 Ningxia Village - People's Republic of China

Waste Management pilot project



FECO - Foreign Economic Cooperation Office

Cooperation project between the Italian Ministry for the Environment and the Chinese Ministry of Environmental Protection for Waste Management pilot project in Ningxia Village.

中意环保合作-宁夏农村生 态环境保护项目

初步研究设计

MAIN TASKS OF THE PROJECT

PHASE 1

- General survey and pilot village definition: During the first period, with the cooperation of the Local Governments of all 4 proposed villages, a survey will be developed in order to define the two villages that will be chosen for the development of the new waste management system.
- Pilot village planning: In a second stage, based on data provided by local Representatives, the preliminary village garbage collection and recycling system will be defined.
- Environmental awareness education and training: Local people will be trained in multiple ways to promote their environmental awareness so that the sustainability of the project could be guaranteed.

PHASE 2

- Critical analysis of the current waste disposal modalities
- Supply of Guidelines for the location of a sanitary landfill
- Supply of Guidelines concerning the construction of a sanitary landfill
- Supply of Guidelines concerning the operation of sanitary landfill
- Preliminary definition of disposal needs for local inhabitants
- Preliminary evaluation of landfill emissions



2011 Busto Arsizio - VARESE - ITALIA

Preliminary Design



Design for Tender participation, Preliminary Design, Revamping of existing ACCAM's S.p.a. Incineration plant, inclusive ordinary maintenance for maximum eight years.



MAIN DATA	
Number lines	2
Grate typology	water cooled moving grate
MSW/RDF capacity	128.000 t/y
Range PCI	6.700 ÷17.600 kJ/kg
Design PCI (NCR)	13.800 kJ/kg
Capacity line (each)	8.000 kg/h
Thermal capacity of combustion chamber	2 x 30,5 = 61 MWt
Power capacity	16 MWe
Capex	53,6 ML euro

2011 Provincia di Salerno - ITALIA

Final Design



Final Design, construction and management concerning a WtE Plant in Salerno province for Tender participation.



l	MAIN DATA	
	Number lines	2
	Grate typology	air cooled moving grate
	MSW/RDF capacity	300.000 t/y
	Range PCI	8.000 ÷18.000 kJ/kg
	Design PCI (NCR)	11.000 kJ/kg
	Capacity line (each)	19.000 kg/h
	Thermal capacity of combustion chamber	2 x 59 = 118 MWt
	Power capacity	32,5 MWe
	Сарех	219 ML euro



2011 Sesto fiorentino - Firenze - ITALIA

Final Design WtE Plant



Final Design, construction and management concerning a WtE Plant in Salerno province for Tender participation.



MAIN DATA

Number lines	1 (extensible to two)
Grate typology	water cooled moving grate
MSW/RDF capacity	137.000 t/y
Range PCI	7.500 ÷18.000 kJ/kg
Design PCI (NCR)	12.100 kJ/kg
Capacity line (each)	20.000 kg/h
Thermal capacity of com- bustion chamber	68 MWt
Power capacity	18,2 MWe
Сарех	110 ML euro



2010 People's Republic of China

Other ongoing projects



Revamping Design of sanitary landfill after earthquake in Gansu Province (People's Republic of China).



15 宁夏废物管理示范项目

2011年启动的废物管理项目拟在宁夏示范农村建立一个废物管理体系。该体系包括垃圾分类收集,分类及堆肥处置。 同时项目也注重对示范农户和农村居民的宣传以提高环境保护意识。项目最终目的是建立成熟模式并可借鉴推广到宁 夏其他类似的农村中。

15 Waste Management Pilot implementation in Ningxia

The project, started in 2011, aims at implementing a waste management system in a pilot rural village in Ningxia. The system set-up includes separated waste collection, sorting plant and composting plant. The implementation of the action will be accompanied by a communication and awareness raising campaign for pilot households and the village population and by training courses for the operators. The project is intended to become a model to be replicated in similar villages Ningxia Government is promoting and building throughout the Province.





2009-2012 Ca' del Bue – VERONA- ITALIA

Preliminary & Final Design WyE Plant



Design for Tender participation, Final design for Incineration Plant. Contract for "construction and Operation & Maintenance (Project Finance) of a new section for waste energy production" (2010 assigned tender).

MAIN DATA		
Number lines	2	
Grate typology	water cooled moving grate	
MSW/RDF capacity	186.000 ton/y	
Range PCI	5.440 ÷18.840 kJ/kg	
Design PCI (NCR)	10.885 kJ/kg	
Capacity line (each)	12.000 kg/h	
Thermal capacity of combustion chamber	2 x 36 = 72 MWt	
Power capacity	20 MWe	
Сарех	140 ML euro	

Services & Design

- Preliminary Design for Tender
- Environmental impact assessment
- Final design
- Final plant permitting
- Preparation of equipment specifications
- Request for proposal preparation
- Assistance to procurement and commercial negotiations
- Offers evaluation



2007 Industrial Area of Pianodardine - Avellino - ITALIA

Final Design



Waste (MSW & Industrial waste) WtE plant in Industrial Area Pianodardine-Avellino

- Preliminary design
- Final design
- Environmental Impact study
- Project for the issuance of Certificate of Fire Prevention
- Integrated Environmental Authorization (AIA) D.Lgs59/2005





MAIN DATA	
Number lines	3
Grate typology	water cooled moving grate
MSW/RDF capacity	421.000 t/y
Range PCI	9.000 ÷18.000 kJ/kg
Design PCI (NCR)	13.500 kJ/kg
Capacity line (each)	18.000 kg/h
Thermal capacity of combustion chamber	3 x 62,5 = 187,5 MWt
Power capacity	50 MWe
Сарех	250 ML euro



2006 Ottana - Nuoro - ITALIA

Preliminary Design WtE Plant



Preliminary design for tender participation of WTE plant in Nuoro, Autonomous Region of Sardinia.

Integrated Management of a thermal power plant in the industrial area of Ottana (NU) to be financed by private capital. Contract award in June 2006.



MAIN DATA	
Number lines	3
Grate typology	water cooled moving grate
MSW/RDF capacity	215.000 RDF + 160.000 = 375.000 ton/y
Range PCI	9.000 ÷18.800 kJ/kg
Design PCI (NCR)	14.000 RDF / 12.000 FB kJ/kg
Capacity line (each)	2 x 18 t/h + 1 x 20,5 t/h
Thermal capacity of combustion chamber	3 x 70 = 210 MWt
Power capacity	55 MWe
Capex	220 ML euro



2005 - 2006 Palermo - Sicilia - ITALIA

Preliminary Design WtE Plant



Preliminary design for a WtE plant.



MAIN DATA

Number lines	3
Grate typology	water cooled mo- ving grate
MSW/RDF capacity	500.000 ton/y
Thermal capacity of combustion chamber	220 MWt
Power capacity	56 MWe
Capex	175 ML euro



2005 - 2006 Augusta (SR) - Sicilia - ITALIA

Preliminary Design WtE Plant



Preliminary design for a WtE plant.



MAIN DATA

Number lines	3
Grate typology	water cooled mo- ving grate
MSW/RDF capacity	500.000 ton/y
Thermal capacity of combustion chamber	220 MWt
Power capacity	56 MWe
Сарех	175 ML euro



2000 - 2003 Colleferro - Roma - ITALIA

Preliminary & Final Design WtE Plant

Preliminary & Final design for a WtE plant.

MAIN DATA	
Number lines	2
Grate typology	water cooled moving grate
MSW/RDF capacity	200.000 ton/y
Range PCI	10.000 ÷18.000 kJ/kg
Design PCI (NCR)	12.000 kJ/kg
Capacity line (each)	15,65 t/h
Thermal capacity of combustion chamber	2 x 52 = 104 MWt
Power capacity	22 MWe
Capex	90 ML euro



1998 - 2000 Maratta - Terni - ITALIA

Preliminary & Final Design WtE Plant



Preliminary & Final design for a WtE plant.

MAIN DATA	
Number lines	1
Grate typology	water cooled moving grate
MSW/RDF capacity	100.000 ton/y
Range PCI	10.000 ÷ 15.000 kJ/kg
Design PCI (NCR)	12.000 kJ/kg
Capacity line (each)	13 t/h
Thermal capacity of combustion chamber	52 MWt
Power capacity	12 MWe
Сарех	35 ML euro



1998 - 2000 San vittore del Lazio - Frosinone - ITALIA

Preliminary & Final Design WtE Plant



Preliminary & Final design for a WtE plant.

MAIN DATA	
Number lines	1
Grate typology	water cooled moving grate
MSW/RDF capacity	100.000 ton/y
Range PCI	10.000 ÷ 19.000 kJ/kg
Design PCI (NCR)	12.000 kJ/kg
Capacity line (each)	12 t/h
Thermal capacity of combustion chamber	52 MWt
Power capacity	10,5 MWe
Сарех	32 ML euro



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