TECHNICAL SPECIFICATION LIST

P569 - Offer 2408GME V40K

UNIT 100 – GRAVITY BATTERY BREAKER

I – SCOPE OF PLANT

The scope of this offer is to provide a line able to treat exhaust lead acid batteries, as specified below.

II – SCOPE OF WORK

The proposal relates to the supply of breaker designed to crush spent batteries with the aim of recovering the components, such as:

- Grids and Poles, to be melted in a rotary furnace for production of antimonial Pb alloy.
- Pure Pb-paste, without organics, to be melted in rotary furnace for production of soft Pb.
- Polypropylene washed ; ABS washed(*)
  (*) notice: with TK108 it is allowed to process PP case and ABS case battery together, otherwise they need to be treated separately.
- PE separators washed.
- Acid:
  a) drained fraction: collected, filtered and stocked in tanks for customer use.
  The drain acid fraction must be collected in the pit of the storage battery as per Seller specification.
  b) Un-drained fraction charged to breaker with the scraps battery,
  The un-drained acid will slowly contaminate process water until, according experience the pH = 3,5 approx.
  To protect the stainless steel from quickly corrosion and protect operators by contact with contaminated water we'll provide neutralizing the water for never pH < 3,5.
  A necessary quantity of the process water should be sent to the water treatment plant, for acid neutralization by lime and then sent back to breaker process again.

III – PROCESS DESCRIPTION

The process is based on a wet classification of the crushed scrap batteries with the scope to separate the components as listed above.

The plant is designed to perform the following operations:
Scraps batteries feeding to crusher:

- Automatic loading the scraps batteries on rubber belt.
- Rubber belt transposting to crusher.
- Scraps batteries crushing by hammer mill.
- Crushed material washing on vibrating screen by set of high pressure spray washers, with paste and water screening and collecting into stirred tank.
- Slurry pumping to the filter press for paste dewatering, with panels (cake) discharging on floor under filter press.
- Filtered water collecting into tank and then re-pumping to wash again the crushed material on the screen.
- PP separation from crushed and washed material by floating in water.
- PE separators separation from grids/poles via water rising current system.
- PE dewatering on vibrating screen.
- Collecting the crusching and paste screening area aerosol to send to water (i/o soda) scrubbing before discharge into atmosphere.
- Grids separation from Poles via inertial force separation system.

The line can operate continuously 24 hours/day.

The whole process is carried out in a wet environment and therefore with very low environmental pollution.

Gianni Mori Engineering S.r.L.
Headquarters. Via Monte Bianco 4, 20900 Monza MB - ITALY
I – REA MB – 1891571 – VAT. 08357310963
+39.0395961249 office@gme-recycling.com www.gme-recycling.com

Soundproof cabin around crusher will be provided to reduce noise under 85 dbA and pollution, to be conveyed and treated in a dedicated wet scrubber.

The operators must wear protective clothing with: safety shoes, mask, glasses and gloves.

Warning: Running with process water at pH <3,5 is not allowed and at customer risk, that relives the Seller from the guarantee on the plant.

IV- SUPPLY DESCRIPTION

Capacity: the plant is designed for a capacity of 9.6 t/h as standard, with max capacity of 10 t/h of charged scraps battery running two shifts a day, for 260 working days a year equal to 153.8 t/day and 40.000 t/year of scraps battery.

The capacity will be guaranteed with mixed drained batteries (car, truck, etc) based on below mix, with the average following composition:

Automotive	MVRLA/Industrial	Wheeler	VRLA	MIX	Typology
70%	***20%***	***10%***	***0%***		
24,8%	26,6%	38,1%	34,0%	27,561%	grids & poles
40,2%	38,4%	31,3%	37,0%	39,259%	paste (10% PbO, 30% PbO2, 60% PbSO4)
9,0%	6,9%	8,9%	0,0%	6,300%	PP
0,0%	0,0%	0,0%	7,1%	2,143%	ABS
2,0%	0,0%	0,0%	1,0%	1,658%	PE Separators
0,0%	2,15%	1,6%	1,0%	0,286%	Agm
24,0%	26,0%	20,1%	20,0%	22,791%	Electrolyte
100,0%	**100,0%**	**100,0%**	**100,0%**	100,000%	

The plant is capable to manage also AGM separators or Tuboluar Batteries.

All other type of materials/batteries, including full steel case batteries and lithium batteries are not accepted.
Maximum battery diagonal dimension accepted: 800 mm

Gianni Mori Engineering S.r.L.
Headquarters. Via Monte Bianco 4, 20900 Monza MB - ITALY
I – REA MB – 1891571 – VAT. 08357310963
+39.0395961249 office@gme-recycling.com www.gme-recycling.com

104 – WATER, REAGENTS AND FINAL PRODUCTS

WATER

- With full drained batteries, the water is in balance: no water will overflow.
- With full un-drained batteries, there will be excess of water; approx. 1÷2 m^3/h which will be processed at the treatment plant.

FINAL PRODUCTS

• Grids and poles:	Organics: Moisture:	max 1,5% Approx. 5%
• Pb-paste:	Grain size: Moisture: Organics:	max. 0,8 mm max 10% less 0,1%
• Polypropylene (Chips):	Average size: Moisture: Pb-paste:	100 mm approx. 5% 1000 ppm approx.
• PE separators:	Moisture: Pb-metal:	40% approx. 3% max.

- Drained acid (Electrolyte): filtered by specific filter press with mesh filter cloth 5-6 micron *Note: the paste (cake) shall be recycled to breaker*

Gianni Mori Engineering S.r.L.
Headquarters. Via Monte Bianco 4, 20900 Monza MB - ITALY
I – REA MB – 1891571 – VAT. 08357310963
+39.0395961249 office@gme-recycling.com www.gme-recycling.com

105 - MANPOWER REQUIREMENTS
According below **TECHNICAL SPECIFICATION**

106 – UTILITIES

UTILITIES REQUIRED FOR THE BREAKER – COMPLETE LINE		
UTILITY		UNIT 100, 200, 300, 400
INSTALLED ELECTRICAL POWER (V=400 Volt; 3 phase, 50Hz)	kW	480
CONSUMED ELECTRICAL POWER (V=400 Volt; 3 phase, 50Hz)	kW	342
WATER (First filling)	m3	10
WATER CONSUMPTION at 3,5 bar and at 24 °French	m3/h	With drained batteries, the water is in balance: no water will overflow. With full un-drained batteries, there will be excess of water; approx. 1÷2 m^3/h which would be processed at the treatment plant.
COMPRESSED AIR CONSUMPTION at 8 bar (ISO 8573-1: 2010 - CLASS 4-7-3)	Nm3/h	9
FLOCCULANT: Anionic polyelectrolyte flocculant type	g/Ton ULAB charged	15
MANPOWER, excluded auxiliary personel & leaders	N./shift	5

UTILITIES BATTERY LIMITS SUPPLY:
Customer must provide:
Water: at the flanges of our water piping distribution, in continuous and at the temperature/flow listed above.
Electric power: at the main inlet switch of the electric panels normally based in the Control Room, in continuous and at the temperature/flow listed above.
Electric distribution: from electric panels to each utility points, in continuous and at the temperature/flow listed above.
Compresed air: at the single utility points, in continuous and at the temperature/flow listed above.

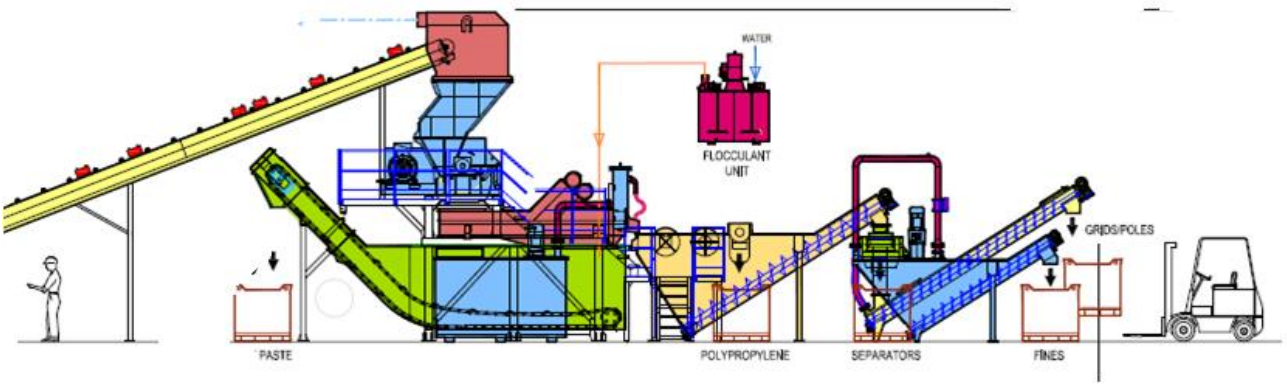
107 - NOISE
Noise level at 1,5 m from crusher noise cabin will be 85 dB(A)

108 – TEST RUN CONDITIONS
One 8 hours continuous running
The unit must process 80 Mton of batteries as per point **3 – (BASIC DESIGN DATA and NOTES)**
During test samples of the final products shall be mutually taken and mutually checked the Parameters as per point 4 – (**WATER, REAGENTS AND FINAL PRODUCTS)**
At the end of test, all data taken shall be by formula balanced; only this balanced data shall be taken for contract parameters checking.
If during test, due to mechanical/electrical machine failure, stops within 4 hours happen, the test period will extend of the same time.
If test run is not successfully passed, Seller has the right to repeat the same up to three time after modifications/improvements of the machine items.

Gianni Mori Engineering S.r.L.
Headquarters. Via Monte Bianco 4, 20900 Monza MB - ITALY
I – REA MB – 1891571 – VAT. 08357310963
+39.0395961249 office@gme-recycling.com www.gme-recycling.com

109– SUPPLY DESCRIPTION

UNIT 100 – GRAVITY BATTERY BREAKER



HP101 - BATTERY HOPPER
Electro-welded SS battery hopper, capacity: 3 m3 with legs on concrete supports, to be charged with polyp tool on overhead crane.
It is possible to charge by basket front loader or fork lift by adding a 1 m ramp up to 2.4 m from the upper edge of the hopper.

VF101 - VIBRATING DOSING EXTRACTOR
Structure in SS sheet reinforced externallyimensions 600 x 3800 mm, Installation on 10 shock absorbers in SS Vibration handling

by means of 2 electric vibrating masses

Gianni Mori Engineering S.r.L.
Headquarters. Via Monte Bianco 4, 20900 Monza MB - ITALY
I – REA MB – 1891571 – VAT. 08357310963
+39.0395961249 office@gme-recycling.com www.gme-recycling.com

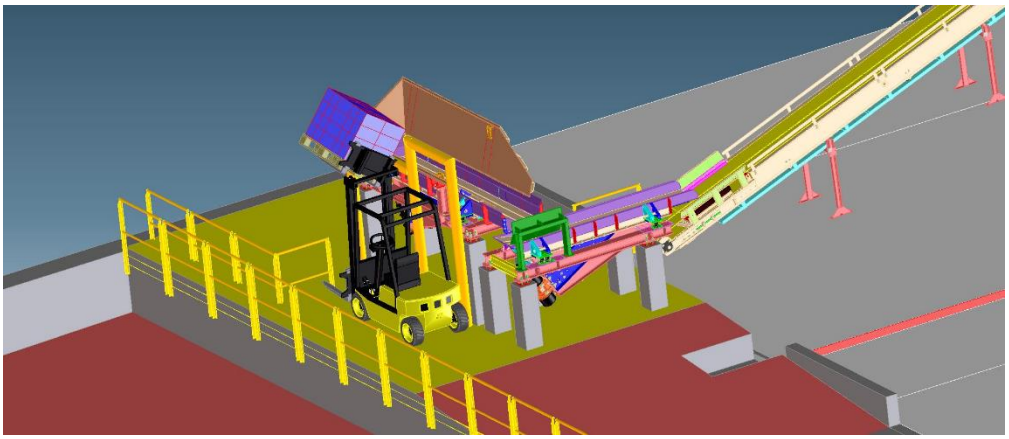
VF102 - VIBRATING CHANNEL
Structure in SS bent sheet metal
Dimensions 500 x 3400 mm
Installation on 6 shock absorbers in SS
Vibration handling by means of 2 electric vibrating masses

MS101 – MAGNETIC SEPARATOR
- Over belt type
- Permanent magnet
- Drive by electric gearbox
- Painted steel supporting frame

MD101 - METAL DETECTOR
- Magnetic sensor Type Bridge around belt
- Dwg for painted steel platform with ladder, construction at customer charge

With magnetic piece crossing under the device the belt stops and on the HMI emergency will be showed, the operator must remove manually the piece and restart the belt by resetting before and pushing bottom.

Automatic feeding description



The VF-101 vibrating extractor doses the scrap batteries on the VF-102 vibrating channel
VF-102 is intended to distribute the individual batteries on the BC-101 belt.
The HP-101 hopper is regularly and periodically loaded with a mechanical shovel.
The MD-101 metal detector has the function of monitoring if magnetic pieces with a size greater than a sphere of 30 mm diameter, are present on the belt, in which case the belt is automatic stopped, one operator must remove manually the detected pieces, the system restarts only after by local pushbutton command.

Gianni Mori Engineering S.r.L.
Headquarters. Via Monte Bianco 4, 20900 Monza MB - ITALY
I – REA MB – 1891571 – VAT. 08357310963
+39.0395961249 office@gme-recycling.com www.gme-recycling.com

BC101 – FEEDING RUBBER BELT
Belt with strong & antacid rubber belt sliding on stainless steel sheet with rolls
Installed inclined 20° max.
Belt net length and width: 13.600 mm, 950 mm, approx.
Helical gearbox antiacid painted at variable speed: 60 m/min max
Belt running by a couple of rollers, with one motorized & rubbered and the other free rotating, tensioned by screws.
Main frame and supporting legs in epoxy painted carbon steel.
Stainless steel sheet under belt collecting the leaching.
Upper side safety covering with side guard along the belt.

HM101 – HAMMER MILL HM800
Case: fully stainless steel, external reinforcement, divided in two parts:
- movable part to inspect rotor and hammers
- fixed part

Case inside lined by set of welded stainless steel armors
N. 16 swinging hammers executed in hardened DUPLEX stainless steel alloy
Special stainless steel rotor with external case supports for bearings
Set of stainless steel disks packed on rotor and supporting the hammers.
Set of shaped rods assembled to form the grid
Charging and discharging hoppers: stainless steel
Charging hopper with suction point and with water pipe nozzle spraying
Drive by electrical motor 132/160 kW* with drive-pulley, V-belt system, safety guards, installed on slide.
Anti-vibrating rubber supports
Electro-welded epoxy painted carbon steel supporting frame
SPP-101 Soundproof cabin shall be provided to ensure reduced noise (<85 dba) and pollution to be connected with wet scrubbing system..
*to be defined at engineering stage completion

VS101 – PASTE VIBRATING SCREEN
Stainless steel execution
Upper covers with inspection door
Rubber sealing to crusher mill
Supported on rubber elements
N. 5 stainless steel selection decks, complete with bars and wedges for fixing to frame, slot opening: 0,8 mm approx.
Discharging extension, for free discharge of the selected and washed product.
Epoxy painted carbon steel frame.
Vibration by electrical vibrators.
Water spraying by several polyurethane nozzles installed on set of stainless steel pipe.

PP101 – PASTE WASHING ON SCREEN
Stainless steel pipe line to feed the water to the several branches including VS01 spray noozles.
Net basket filter with automatic bottom discharge direct into TK105, installed on the inlet line.
Collector tube with connection to several nozzles pipes and to separate pipes feeding water to the VS01 back side.
Several manual ball valves regulating the flow at all the barches pipe.
hosepipes between the pipes and the crusher back side and hopper.
Stainless steel fittings as per necessity.
High-pressure & centrifugal pump in Stainless Steel, total pressure 4,5 bar **P101**

Gianni Mori Engineering S.r.L.
Headquarters. Via Monte Bianco 4, 20900 Monza MB - ITALY
I – REA MB – 1891571 – VAT. 08357310963
+39.0395961249 office@gme-recycling.com www.gme-recycling.com

TK101 – PASTE SETTLING TANK
Shaped tank divided in sections:
Slurry receiving section.
lamellar pack section
overflowing of clean water separated tank section
bottom motorized scrapping conveyor
Execution in Stainless steel sheet
Top cover with inspection window
Water level sensor
Bottom connection to P101 pump in the separated tank
Bottom valve for tank empty
Water feeding valve with level sensor for the tank filling.

TK104 – DEVICE FOR FLOCCULANTS DOSING
N. 1 tank with stirrer and with level sensor.

TK105 – SLURRY STIRRED TANK
- Rounded tank, top covered, bottom convex
- Execution in stainless steel external reinforcement
- Top cover with slurry inlet window and strong enough to support the stirrer and to allow walking on it. Motorized vertical stirrer with planetary gearbox and with inclined blades
- Continuous level sensor
- Bottom connection to P102 pump
- Bottom valve for tank empty
- Top overflowing pipe

P102 – SLURRY FEEDING PUMP TO FILTER PRESS
- Pneumatic stainless steel ball valve installed at the bottom nozzles of TK105.
- Stainless steel slurry pump, with packing seals, electric motor drove by inverter.
- Special design slurry pipe connecting TK105 and with filter press (*)
- Separate pipe feeding water, with automatic valve, to slurry pipe for washing as per needs.
- Set of Pump's support, with valves and pipes support in epoxy painted steel **(PP102)**.
  (*) the pipeline is in close loop to recycle the slurry flow to TK105 tank when the filter press is full.

FP101 – PASTE FILTER PRESS
The scope is to get dried paste cake as per picture:

NOTE: The filter press is available also for de-sulphurated paste processing.
Main characteristics:
- High-beam frame with accessories; filtrate collector closed and incorporated, automatic detachment system driven by an inverter, automatic hydraulic closure by pushing and electrical system on board.
- set of normal and membrane plates plus 2 heads, plates dimension 1500x1500 mm, chamber thickness 40 mm; plates PPH material, special
- filtering cloths; cylinder shaft extension, heads covered by stainless steel sheets; epoxy paint, bolts and nuts stainless steel, safety protections with back sliding door and photo cell barrier in front side; stainless steel filtered discharging pipe with automatic drain valve; filtration stop by electronic flow meter; automatic cleaning of the central inlet pipe by air compressed;
- hydraulic unit water cooled to drive oil cylinder shaft protection by plastic guard.

Gianni Mori Engineering S.r.L.
Headquarters. Via Monte Bianco 4, 20900 Monza MB - ITALY
I – REA MB – 1891571 – VAT. 08357310963
+39.0395961249 office@gme-recycling.com www.gme-recycling.com

- stainless steel butterfly valve, with pneumatic drive with limit switch installed.
- stainless steel chain to transfer plates.
- Total filtration volume installed: 3.500 dm3 approx.
- Automatic control software system
- Board machine wiring with junction boxes and local push button.
- Drops-collect tank with horizontal opening – stainless steel.
- Stainless steel leakage collectors.
- Filtering pressure 7 bar at 80°c max.
- Cake squeezing by compressed air at 13 bars.
- Compressed Air.
- Suction vapor hood with suction points.
- Set of pipes and valves **(PP103)**

SC104 – TWIN SCREW CONVEYOR UNDER FP-101
Cake discharging on twin screw conveyor transferring it to big bags.

TK106 – FILTRATE TANK
- Fiberglass execution.
- Level control switch.

TK102 – LIGHT PLASTIC SEPARATION TANK
- Trapezoidal shape with sloping of 32° approx.
- Stainless steel construction.
- Bottom manual valve.
- Overflow discharge.
- Support legs in epoxy painted carbon steel.
- water filling valve with level control.
  PUSHERS FOR LIGHT PLASTICS.
- Pushers set – Stainless steel.
  LIGHT PLASTICS EXTRACTION SCREW.
- Large diameter screw, low speed.
- Stainless steel construction.
  BOTTOM SCREW EXTRACTION FOR GRIDS/POLES AND HEAVY PLASTICS **(SC103).**
- High thickness screw, high speed
- Stainless steel construction
- Inclined installation 32°

HD101 - HYDRODYNAMIC SEPARATOR, WATER RISING CURRENT TYPE
- Stainless steel vertical column, rectangular and Y shape.
- Bottom connection to SC103 screw.
- Top water and heavy plastic overflowing, with shaped inlet to VS102 screen
- Inclined high thickness **SC103** screw for grids/poles extraction, 32° Inclined execution, stainless steel construction.

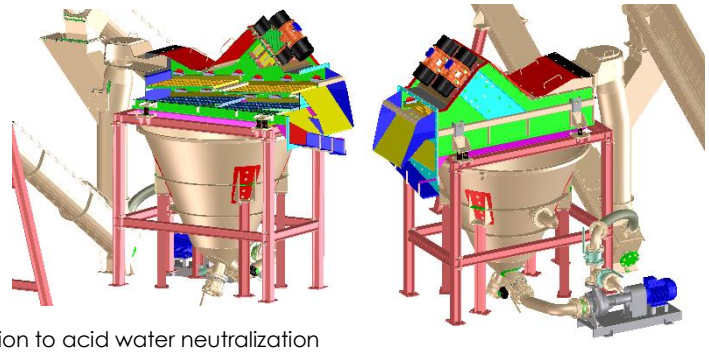
TK108 – ABS/PP SPEARATOR TANK
- Stainless steel execution.
- Separating by gravity the ABS from the PP in clean water.

VS102 - VIBRATING SCREEN, WATER/HEAVY PLASTICS/FINES SEPARATION

Gianni Mori Engineering S.r.L.
Headquarters. Via Monte Bianco 4, 20900 Monza MB - ITALY
I – REA MB – 1891571 – VAT. 08357310963
+39.0395961249 office@gme-recycling.com www.gme-recycling.com

Manufactured in stainless steel

- Vibrating screen twin bed with screening plans, bars and wedges in floating polyurethane plates, top plate with holes diam. 5 mm and the botton one 1 mm.
- N. 2 electro vibrators.



TK103 – HYDRODYNAMIC SEPARATOR WATER TANK WITH P103 PUMP

- Stainless steel execution, conical shape
- Horizontal pump **(P103)** connected with bottom tank for water recirculation to the HD101 hydrodynamic separator
- Stainless steel piping with hose terminal connecting the pump with the hydrodynamic separator and with connection to acid water neutralization plant **(PP104)**.

TS101 – STEEL FRAMES & STAIRS AND PLATFORM

Support structures – steel epoxy painted.
Stairs and platforms – steel epoxy painted with steps and walking ways in fiberglass.

CP101 – GENERAL ELECTRIC PANEL FOR UNTIS 100, 200, 300, 400

The panel must be installed in properly room which must be identified as an ordinary room; with the following characteristics:

- Built in non-combustible material.
- Free of explosive substances.
- Not subject to the accumulation / presence of flammable gases or vapors.
- Not subject to the accumulation / presence of combustible dusts.
- For the exclusive use of the staff and with specific use for electric panel.
- Air conditioned room with Temp. <30 ° C.

Network characteristics:

- TN-S power system.
- 3F power supply.
- Line voltage 400 Vac ± 10%.
- Mains frequency 50 Hz ± 2%

Main construction characteristic:

- Siemens or Yaskawa inverter or similar.
- Piplzer or Siemens SAFETY RELAY.
- SIEMENS electro-mechanical material.
- Phoenix terminal blocks.
- Whoner or Siemens power distribution system.
- Emergency push button, auxiliary insertion selector with led.
- Multifunctional digital indicator (DIGITAL MULTIMETERS).
- General switch for the board line services (lights, fans, sockets).
- Circuit-breakers for auxiliary protection circuits.
- Circuit-breakers for power engines protection circuit.
- Stabilized feeding 110/24VDC 50 Hz.
- Siemens S7 1200 PLC with CPU S7-214 digital 24 V DC inlet cards, digitals outlet 110V AC.
- Analogical i/o cards 4-20 mA.
- Customer power voltage 400V 50HZ 3 phases +/- 10%.
- Auxiliaire voltage 220V AC, 24V DC.
- Short-circuit current $IIkk$ of 10 kA.
- Max temperature 30° C.
- Protection degree IP 54.
- Moden for remote control via internet.
- UPS battery goup for auxiliaire voltage.
- SW01 – software to manage all the process executed in WinCC or TIA portal.
- 30 days of HMI routine program trial version.

Gianni Mori Engineering S.r.L.
Headquarters. Via Monte Bianco 4, 20900 Monza MB - ITALY
I – REA MB – 1891571 – VAT. 08357310963
+39.0395961249 office@gme-recycling.com www.gme-recycling.com

Desk PC with 15" ASEM HMI.

UNIT 200 – ACID FILTRATION

Collect and clean the drained electrolyte from the battery recovered in the storage
Concrete collection pit for drained acid from the battery storage pool (at buyer charge)
P200 - Membrane pump to feed the drained acid to the filter press.
FP200 - Filter press separating the acid from the solid contaminants, cap. 400 litres.
TK200 - Fiberglass tank to collect the filtered acid.
P201 - PP pump to send the acid at the final customer destination.

UNIT 300 – AEROSOL COLLECTING & SCRUBBING

SR301 – AEROSOL SCRUBBING SYSTEM
Water scrubbing of the polluted mist abatement UNIT 100, main characteristic:

Polypropylene execution.
Capacity: 10.000 m3/h.
Temperature: room temperature.
Flow characteristics: drop of water containing sulfuric acid in solution.
Venturi device, variable geometry section.
Polypropylene execution.
Centrifugal fan Polypropylene/SS execution.
Recovery bottom tank, with inspection door.
PP Vertical pump.
Piping for pump and scrubber interconnection.
Mechanical water feeding valve and bottom emptying valve.
Couple of level control with protection lining.
pH-meter to detect the acidity limit.
Piping, valves, caps for crushing area.

Gianni Mori Engineering S.r.L.
Headquarters. Via Monte Bianco 4, 20900 Monza MB - ITALY
I – REA MB – 1891571 – VAT. 08357310963
+39.0395961249 office@gme-recycling.com www.gme-recycling.com

UNIT 400 – BREAKER ACID WATER NEUTRALIZATION

I – SCOPE OF PLANT

The scope of the plant is the neutralize the acid water coming from battery battery tank and to return to tank itself.

II – SCOPE OF WORK

Capacity of the plant: up to 4 m³/h of acid water from battery breaker

The scope of the work is to keep the breaker tank water at PH>4,5:

III – PROCESS DESCRIPTION

The neutralization consist at first in converting the H2SO4 acid to CaSO4 calcium sulphate by reaction with Ca(OH)2 hydrate calcium into water, then by CaSO4 calcium sulphate dewatering by filter press to dispose it.
The neutralized filtered water is sent back, in close loop, to the breaker tank.
The standard reaction is:

H2SO4 + Ca(OH)2 = CaSO4 (gypsum) + 2H2O

The gypsum produced by filter press shall content 25 to 30% approx. of water and of course some mg/Kg of lead paste.
The recycled filtered & neutralized water will be at pH 8/9 average.

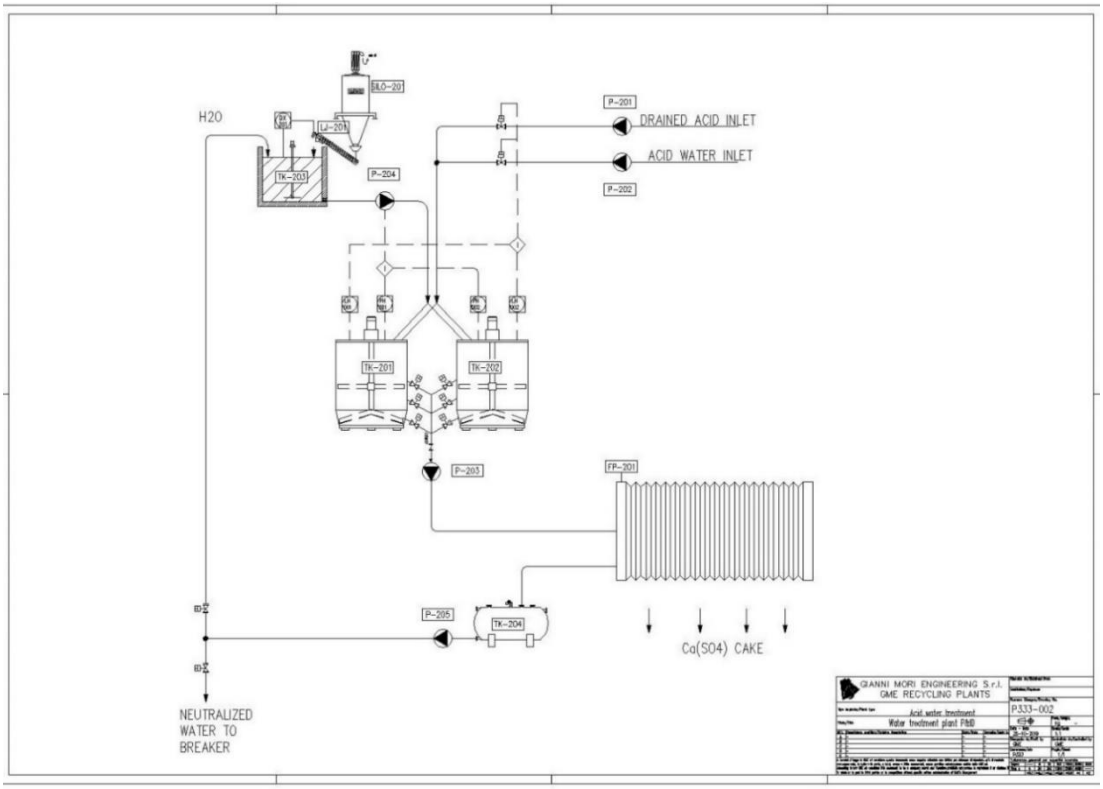
IV- SUPPLY DESCRIPTION

Engineering

- drawing of masonry works
- flow scheme
- electric and hydraulic scheme
- equipment assembly drawings
- Use and Maintenance manual according to EU 2006/42 / EC

Machinery, according below schema

Gianni Mori Engineering S.r.L.
Headquarters. Via Monte Bianco 4, 20900 Monza MB - ITALY
I – REA MB – 1891571 – VAT. 08357310963
+39.0395961249 office@gme-recycling.com www.gme-recycling.com



P401 – ACID WATER PUMP, FEEDING TO REACTORS

Breaker tanks acid water feeding pump, Stainless steel execution.

TK401/02* – PRFV STIRRED TANK WITH LEVEL SENSOR AND PH CONTROL (PH401)

PRFV execution.

The tank is equipped with:

- N. 1 low speed mixer, with shaft manufactured in SS coated in PVC.
- N. 1 **PH401** set of devices (PH controller, PH probe with transmitter and shielded electrical connection) to control the process of neutralization of the acid water.

*to be defined at engineering stage completion

P402 – PERISTALTIC CENTRIFUGAL PUMP

- Slurry feeding pump, Stainless steel execution, type vortex with packing seals fluxing and with pipe washing system.

LD401 – LIME DOSING SYSTEM

- Station supporting the big bags.
- Dosing screw conveyor with variable speed.

TK404 – CS STIRRED TANK with level sensor, pH control

Lime solution preparation system by using super ventilated hydrated calcium Ca(OH)2 to reach the right physicochemical of the treating water, it is provided the Ca(OH)2 feeding, provided with level switches.

Gianni Mori Engineering S.r.L.
Headquarters. Via Monte Bianco 4, 20900 Monza MB - ITALY
I – REA MB – 1891571 – VAT. 08357310963
+39.0395961249 office@gme-recycling.com www.gme-recycling.com

P403 – CS LIME FEEDING PUMP

- Ca(OH)2 dosing system by pump with flow regulation system.

FP401 – FILTERPRESS

- Type of filter press:	Side Beam
- Opening/closing:	automatic by oil cylinder
- Material of plates:	Polypropylene HDDP
- Material of the cloths:	Polypropylene
- Feeding hole:	Central
- Volume of the filter press:	80 dm3
- Filtration pressure:	6 bars
- Blowing cake pressure:	8-10 bar
- Pressure design filter press at 25°C:	12 bars
- Temperature of filtering:	25 °C
- Pressure of instruments air:	6 bar max

PP401 – PP piping

Set of piping for the connection of the entire Unit, including set of level sensors and valves **(LT/PV)**.

NOTE: above figures/dimensions/performances may vary based on the engineering outcome once the project will be started.

Gianni Mori Engineering S.r.L.
Headquarters. Via Monte Bianco 4, 20900 Monza MB - ITALY
I – REA MB – 1891571 – VAT. 08357310963
+39.0395961249 office@gme-recycling.com www.gme-recycling.com