



ACID RETARDATION  
FOR PICKLING BATHS  
REGENERATION  
RESIBED

WITH AN ATTENTIVE  
EYE TO NATURE





## ACID RETARDATION FOR PICKLING BATHS REGENERATION RESIBED SERIE

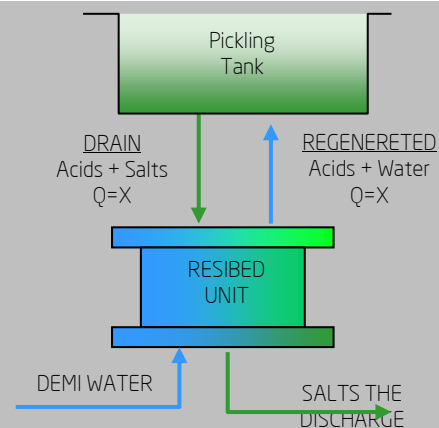
### APPLICATION

WORKING OF RESIBED REGENERATION UNIT IS BASED ON THE CAPACITY OF PROPER IONIC RETARDATION RESINS TO SLOW DOWN THE FLOW OF MINERAL ACIDS WHILE LETTING PASS THE METALLIC SALTS, WHICH ARE PRESENT IN THE PICKLING SOLUTION.

THE ADSORPTION PROCESS IS REVERSIBLE THEREFORE THE ACID ADSORBED BY THE RESIN IS REMOVED BY A SIMPLE PASSAGE INTO WATER AND THEN RECOVERED IN THE PICKLING BATHS.

THE SYSTEM DOES NOT REQUIRE ANY CHEMICAL ADDITIVE WHILE THE ENERGY CONSUMPTION IS PRACTICALLY ZERO SINCE IT IS LIMITED TO MAKE MODERATE FLOWS PUMPS WORKING.

### WORKING PRINCIPLES



THE PLANT HAS A MODULAR STRUCTURE AND IS MADE BY A SERIES OF EQUIVALENT BEDS. IT CAN SIMPLY BE DIMENSIONED ACCORDING TO THE CUSTOMER NEEDS.

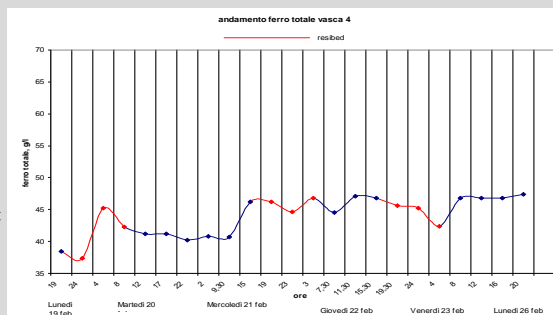
EACH BEDS CAN PROCESS 500 L/H OF PICKLING SOLUTION RECOVERING THE FREE ACID.

THE PLANT IS MANAGED TOTALLY AUTOMATIC BY A PLC.

### ADVANTAGES

THE MAIN ACHIEVED ADVANTAGES BY USING RESIBED UNIT ARE:

- STEADY PICKLING CAPACITIES
- REDUCTION OF THE ACIDS CONSUMPTION
- REDUCTION OF THE AMOUNT OF SLUDGE TO PURIFY
- REDUCTION OF THE CONSUMPTION OF REACTIVE IN THE NEUTRALIZATION STEP
- LESS PERSONNEL INVOLVED IN THE MANAGEMENT OF ACIDS AND PROCESS SOLUTIONS
- PRODUCTION OF A WASTE READY TO BE SUBMITTED TO A METAL RECOVERY PROCES



### MODELS

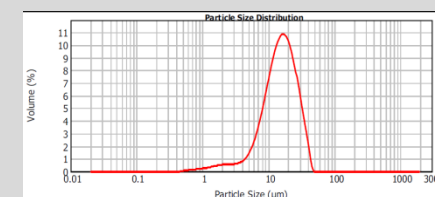
MODEL	TREATMENT CAPACITY (l/h)	DIMENSION (mm)	INSTALLED POWER (Kw)	REAL CONSUMPTION (Kw)
MINI RESIBED	250	1.100X1.500X1.600h	2,2	0,66
RESIBED 500	500	1.100x1.500x1.600h	4,4	1,32
RESIBED 1000	1.000	2.200x1.500x1.600h	8,8	2,64
RESIBED 1500	1.500	3.300x1.500x1.600h	13,2	3,96
RESIBED 2000	2.000	4.400x1.500x1.600h	17,6	5,28
RESIBED 2500	2.500	5.500x1.500x1.600h	22,0	6,60
RESIBED 3000	3.000	6.600x1.500x1.600h	26,4	7,92
RESIBED 3500	3.500	7.700x1.500x1.600h	30,8	9,24
RESIBED 4000	4.000	8.800x1.500x1.600h	35,2	10,56
RESIBED 4500	4.500	9.900x1.500x1.600h	39,6	11,88
RESIBED 5000	5.000	11.000x1.500x1.600h	44	13,20

### PRETREATMENT

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THE TRADITIONAL FILTRATION SYSTEMS GENERALLY PROVIDED FOR THIS TYPE OF PLANT HAVE BEEN REPLACED BY EFFECTIVE DECANTING UNITS WHICH, WITH THE AID OF A PARTICULAR POLYELECTROLYTE, ALLOW TO ELIMINATE EVEN THE SMALLEST DISPERSED PARTICLE THIS IS ALSO THE CASE WITH MICROPARTICLES HAVING DIMENSIONS OF TENS OF MICRONS PRODUCED BY MODERN ELECTROLYTIC PICKLINGS

THE PRETREATMENT PHASE IS COMPLETED BY SOME SAFETY CARTRIDGE FILTERS



### OPTIONAL

#### AUTOMATIC TITRATOR

FOR HIGH PRODUCTIVITY AND / OR INDUSTRY 4.0 PLANTS, AUTOMATIC TITRATORS ARE AVAILABLE TO CONTROL AND RECORD ALL PROCESS PARAMETERS SUCH AS REDOX TEMPERATURES, METAL CONCENTRATION, BIVALENT IRON (FOR NITRIC FREE PICKLINGS) AND FREE ACIDS, AND TO KEEP THEM CONSTANT, THROUGH THE DOSING OF FRESH ACIDS AND RUNNING THE RESIBED UNIT.



#### OXIDES RECOVERY UNIT

WITH THE USE OF OUR OXYREC UNIT IT IS POSSIBLE TO RECOVER THE OXYDES AND THE PICKLING SOLUTION AS WELL AS DISCHARGED BY SLUDGE REMOVING UNITS.



#### DECANTING UNIT

IF IT IS NECESSARY TO CLEAN ALL THE PICKLING SOLUTION, IT MAY BE PROVIDED A LARGER DECANTING UNIT.

IN THIS CASE THE PICKLING SOLUTION CONTINUALLY FEEDS THE DECANTING UNIT AND ONLY A SMALL PART OF THE CLARIFIED LIQUID IS DIRECTED TO THE BED



#### OTHER OPTIONS

- DOUBLE FILTER INSTALLED
- DOUBLE PUMPS INSTALLED
- TWIN MODEL FOR OPERATION ON MULTIPLE TANKS
- CONDUCTIMETER FOR PROCESS OPTIMIZATION
- SOFTENER
- CONTAINER HOUSING