HYDROCHLORIC ACID REGENERATION UNIT WITH MULTIACID TOWARDS ZERO LIQUID DISCHARGE HOT DIP GALVANIZING
HOW IT WORKS:
HCl pickling baths can be regenerated with Multiacid in a dedicated machine, following these steps:
1. Spent liquor storage
2. Suspended solids filtering
3. Processing with Multiacid
4. Insoluble iron oxide filtering
5. Regenerated acid storage
6. Full regenerated tank back to the process

THE BEST SOLUTION FOR:
• High spent acid disposal costs;
• Costly or poor supply of fresh HCl;
• Uncertain availability of disposal;
• Special environmental requirements;
• Heavy taxation on wastes

ADVANTAGES OF USING HYDROCHLORIC ACID REGENERATION UNIT (H.A.R.U.)
• 95% reduction of new HCl acid purchasing costs;
• No more spent liquor disposal;
• No more spent HCl tank trucks to be dispatched to treatment centers;
• Steady pickling efficiency, since process parameters remain optimal;
• Easy and safe process, which doesn’t generate any emission;
• Zero liquid volume balance, since Multiacid is a crystalline salt which doesn’t increase the volume of processed liquor.

LEGEND:
1. Filtering / Deoiling device
2. Reactor
3. Loading hopper
4. Filtering unit
5. Cake washing system
6. Regenerated acid buffer
7. Control panel
8. Cake discharge hopper

SOLID RESIDUE

MULTIACID
MULTIACID is Soprin’s answer to spent acid regeneration issue.
MULTIACID is an hydrochloric pickling baths regenerator.
MULTIACID acts directly on ferrous chloride in the spent liquor, reversing pickling reaction and breaking iron-chlorine chemical bond, giving back hydrochloric acid and an insoluble iron oxide that can be easily separated by filtration.

SELECTION TABLE
A complete built-in container size unit, plug and play designed to be ready for start up.
TECHNICAL SPECIFICATIONS:

<table>
<thead>
<tr>
<th>MINI</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Batch volume [liters/gallons]</strong></td>
<td>750/198</td>
<td>2500/660</td>
<td>5000/1320</td>
</tr>
<tr>
<td><strong>Installed power [kW]</strong></td>
<td>5</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td><strong>Voltage</strong></td>
<td>400 V / 50 Hz</td>
<td>400 V / 50 Hz</td>
<td>400 V / 50 Hz</td>
</tr>
<tr>
<td><strong>Compressed air requirement [NL/min]</strong></td>
<td>1000</td>
<td>1500</td>
<td>2000</td>
</tr>
<tr>
<td><strong>Compressed air minimum pressure [bar/psi]</strong></td>
<td>6/87</td>
<td>6/87</td>
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</tbody>
</table>

Notes (technical specifications may vary):
- US standard voltage available on request
- Additional heating system requires 22 kW more power

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<tbody>
<tr>
<td><strong>Dimensions L x W x H [mm/ft]</strong></td>
<td>2438 x 1219 x 1422 (8' x 4' x 4'8&quot;) (2 units)</td>
<td>6096 x 2438 x 2591/20' x 8' x 8'6&quot; (2 units)</td>
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</tr>
<tr>
<td><strong>Empty weight [kg/lbs]</strong></td>
<td>Unit 1: 320/704</td>
<td>9500/20944 (2 units)</td>
<td>9500/20944 (2 units)</td>
</tr>
<tr>
<td><strong>Full load weight [kg/lbs]</strong></td>
<td>Unit 1: 2000/4400</td>
<td>13500/29744 (2 units)</td>
<td>13500/29744 (2 units)</td>
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**CONNECTIONS**

<table>
<thead>
<tr>
<th>MINI</th>
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<tbody>
<tr>
<td><strong>Spent acid</strong></td>
<td>DN32</td>
<td>DN40</td>
<td>DN40</td>
</tr>
<tr>
<td><strong>Regenerated acid</strong></td>
<td>DN32</td>
<td>DN40</td>
<td>DN40</td>
</tr>
<tr>
<td><strong>Water</strong></td>
<td>¾&quot;</td>
<td>1&quot;</td>
<td>1&quot;</td>
</tr>
<tr>
<td><strong>Compressed air</strong></td>
<td>¾&quot;</td>
<td>1&quot;</td>
<td>1&quot;</td>
</tr>
</tbody>
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