INDIRECT DRY COOLING SYSTEM

Indirect dry condensing system coupling a dry cooling tower with a steam condenser is available for any large capacity condensing units. Steam flowing from the turbine is condensed by cold cooling water in either a surface condenser or in a jet condenser. The heated water is then pumped to the heat exchangers arranged vertically around the concrete tower. Airflow across the heat exchangers is created by the natural draft cooling tower.

Indirect Dry Cooling Tower (IDCT) systems have been used for over 50 years for various applications in the power industry. SPX Dry Cooling has supplied the largest indirect system presently in operation in the world.

INDIRECT DRY COOLING FEATURES

The finned tubes bundles are arranged vertically in delta cooling elements around the perimeter of the tower – (see below). The delta cooling elements incorporate louvers on the front and finned tube heat exchangers on the back sides, to control airflow and preventing freezing during cold conditions.

The finned tube is the key component. The indirect dry cooling tower is equipped with either MCT – a multi-channel aluminum cladded carbon steel flat tube with brazed aluminum fins providing outstanding reliability and performance or RAFT – round aluminum tubes with aluminum fins.

There is enough space inside the tower to install a FGD unit. Due to the natural draft created by the large concrete shell, only a short chimney is necessary to lift the flue gas.

The typical scope for an IDCT installation includes the heat exchangers, the louvers, the supporting structure, the water piping and tanks, auxiliaries such as the circulation pumps, cleaning system and instrumentation.
### INDIRECT DRY COOLING

#### MAJOR BENEFITS

<table>
<thead>
<tr>
<th>Reduced auxiliary power</th>
<th>More stable steam turbine back pressure</th>
<th>Quiet operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Few rotating parts translate into low maintenance and high availability</td>
<td>Hot air recirculation avoided by the tall concrete shell</td>
<td>Option to install the Flue Gas Desulfurization (FGD) unit inside the tower</td>
</tr>
</tbody>
</table>

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