Water Cooled Cable Selection Procedure

The Water Cooled Cable Selection Chart is based on a current density rate of 3000 amps per square inch, operation on a continuous duty basis, with a minimum coolant flow of 8 GPM per cable (This chart should not be used in conjunction with cables exceeding a length of fifty [50] feet).

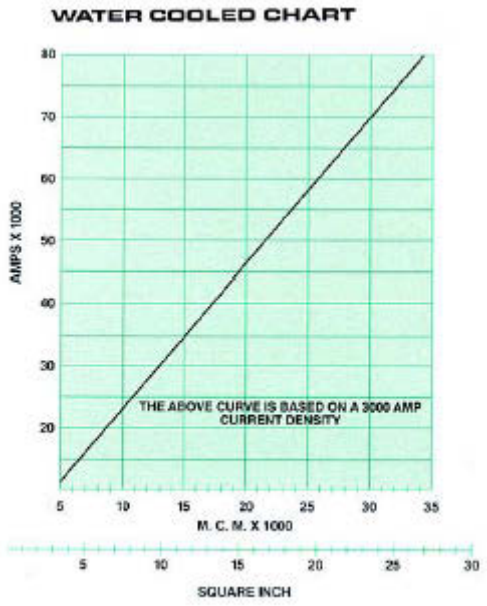
To determine the total number of circular mills per phase refer to the following example:

Example 1:

The maximum current requirement per phase is 60,000 amps.

STEP 1: Locate the 60,000 ampere point on the left hand vertical scale of the "Water Cooled Chart".
STEP 2: Draw a horizontal line across the chart until it intersects the inner slanted scale.
STEP 3: At the point of intersection, draw a vertical line down until it crosses the first horizontal scale at the bottom of the chart, representing the total number of circular mills required to carry the specified load for each individual phase, this being 26,000 MCM.

If the recommended number of square inches of copper is of interest, continue the vertical line down to the second horizontal or lower scale, indicating 20 square inches.



Water Cooled Cables

Selection Charts (continued)

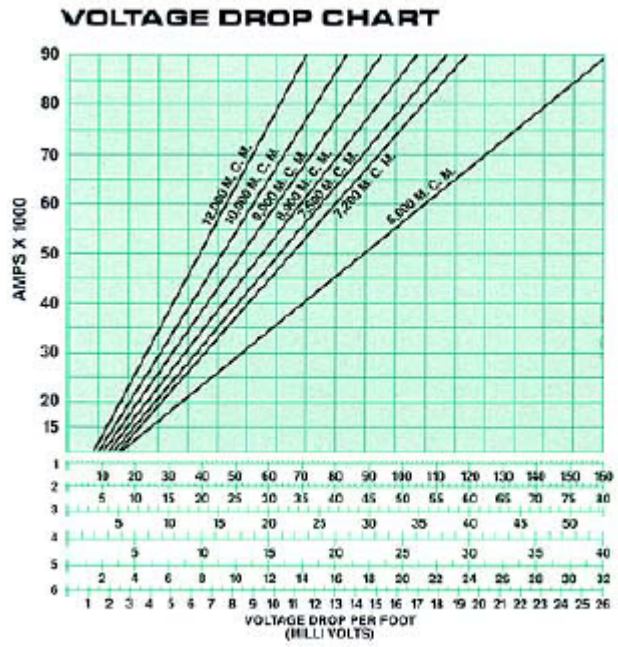
The voltage drop chart indicates the amount of DC voltage drop per foot on standard water cooled cables, and also the total phase drop on cable groups from one through six.

Example 1:

3 cables per phase, 55,000 amps per phase, 32 foot long (overall) 8000 MCM per cable.

STEP 1: Draw a horizontal line from the 55,000 ampere point on the left hand vertical scale of the "Voltage Drop Chart" across the chart until it intersects 8000 MCM on the inner slanted scale.
STEP 2: Draw a vertical line from the point of intersection down until it intersects the lower horizontal scale representing 3 cables per phase. With the above combination of factors a 24.1 millivolts drop per foot will be determined.
STEP 3: Multiply the 24.1 millivolt drop per foot by the overall cable length of 32 feet. The total phase voltage drop will amount to 771.2 millivolts or .771 volts.

If quantities other than 3 cables per phase are required, follow the above sequence, except refer to the lower horizontal scale representing the number of cables necessary.



Above charts should be considered only as a guide. Consult factory for exact data.