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COPPER COATED CONDUCTOR ROLL

The TAFE arc spray technique has been used successfully, depositing thick copper coatings on carbon steel electro-tinning strip conductor rolls. The 11-foot long roll was sprayed with 1200 pounds of copper. The finished thickness of the copper coating ranged from 5/8 inch on the 18-inch diameter roll face to 1-1/2 inches on the journal ends. The roll face ends were also sprayed to provide a 3/4 inch copper coating.

The arc spray process enables a heavier deposit of copper to be achieved with higher conductivity than is normally achieved with metal spraying. The cool arc spray also permitted faster spraying without copper discoloration. Chrome plating to the copper coat is also made more easily. (See TAFE Bulletin 1.9.1.2-05T for specific spraying, finishing parameters and coating properties).

