

A COMPOSITE UTILITY POLE AND METHOD FOR MAKING SAME

ABSTRACT OF THE DISCLOSURE

A hollow, tapered, fiber-reinforced plastic utility pole, and a method for making the pole. The pole is designed by a computer-modelling technique that simulates applying resin-coated, reinforcing strands over the outer surface of a mandrel. A plurality of test stations are incrementally spaced from the tip portion to the butt portion of the pole simulated on the mandrel. The thickness-to-diameter ratio must be equal to or greater than an established constant at each station or additional circuits of resin-coated, reinforcing strands deemed to have been applied, as required. One then calculates the stress resistance at each successive station to determine if the acceptable stress is greater than the stress resistance required. Whatever additional circuits of resin-coated, reinforcing strands are necessary are then deemed to have been applied. One then calculates the projected failure load in response to the deflection calculated to occur in response to the rated load at each station to determine if the actual loading to be applied to the pole in relation to the projected failure load at that station is acceptable. The acceptable stress is modified by a binary chopping routine until the relation of the projected failure load and the rated load differ by an acceptable amount. All tests are recalculated until no further changes are required. The pole may then be laid up on a mandrel, and the resin cured to complete the pole.

This Sheet Has Been Replaced



NOT TO BE

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