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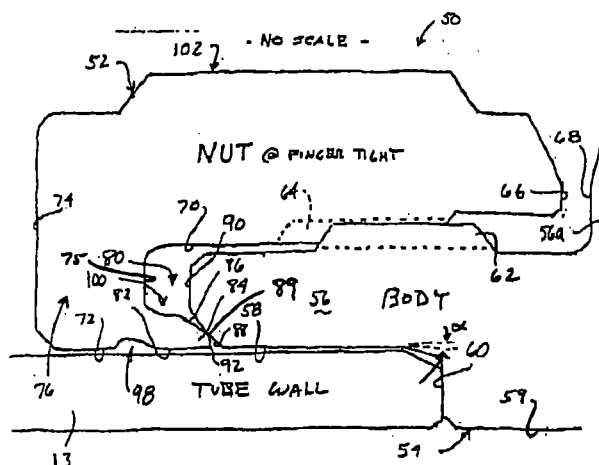
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[Continued on next page]

(54) Title: TUBE FITTING FOR STAINLESS STEEL TUBING



(57) Abstract: A tube fitting (50) that uses only two components, namely a fitting body (54) and a fitting nut (52). The nut and body are adapted to be threadably coupled together by relative rotation therebetween. The nut includes an integral tube gripping ring (80) that cooperates with a camming surface (88) on the body when the fitting is made-up. The camming surface (88) preferably has a steep camming angle. The ring (80) is radially compressed against the tube outer wall to form a seal and a tight tube grip. The ring (80) also forms a line contact-type seal against the camming surface (88). The ring is designed to have a hinging action and to plastically deform during pull-up to embed into the tubing for excellent tube grip, and an axially adjacent swage or collect zone that isolates any stress riser resulting from the embedding action from vibration effects. The fitting components, and particularly the ring, may be hardened. the fitting may include a self-gauging feature to indicate sufficient pull-up to prevent excessive pull-up. Also provided is a single ferrule tube fitting that uses a steep camming surface (88) and is at least about 3.3 times harder than the stainless steel tube end.

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