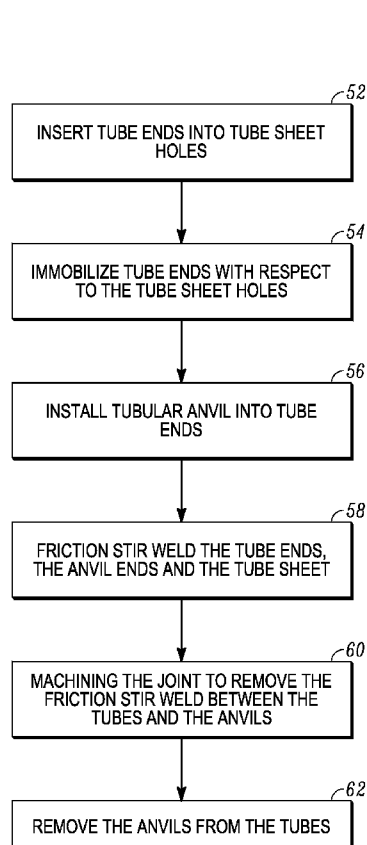




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(54) Title: METHOD OF FRICTION STIR WELDING A TUBE TO AN ELEMENT USING A TUBULAR ANVIL; STRUCTURE MANUFACTURED BY THIS METHOD



(57) Abstract: A process that uses friction stir welding to connect a tube, for example a thin gauge tube having a wall thickness of about 2.54 mm (0.100 inch) or less, to another element, such as a tube sheet of a heat exchanger. The process employs a tubular anvil that is installed into the end of the tube and which, in one embodiment, can provide material during the friction stir welding process. After the weld is complete, the weld zone between the tubular anvil and the tube is machined away and the anvil tube removed.

FIG. 2



MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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