At the recent request of a customer who was deliberating the purchase of “less expensive” bulk (gunk) compounded compression “stamped” (molded) fittings versus the superior machine made filament wound contact molded fittings, the Industrial Fiberglass Specialties test lab performed the following ASTM 1599 Burst Test for this customer’s witness. This test would issue predictable results, based on Industrial Fiberglass’ many prior results in identical comparative testing -- and it did. Following is the Quality Assurance laboratory test report:

CONFIDENTIAL TEST REPORT

Test Parameters:
1 each, 4" diameter 90 degree elbow from Fibercast and 1 each
4" diameter 90 degree elbow of Industrial Fiberglass
manufacture, were tested to ultimate hydraulic failure with free
end closures allowing maximum hoop, axial, and bending
stresses to interact. Internal pressure was increased by 100
psig increments, after each 60 second dwell period.

Product Definition:
1. Fibercast Figure #CL 255 C x 4": 90 degree, cement
    socket, vinylester elbow, fabricated with Fibercast CL-200
    adhesive, bonded to Series 5000 epoxy vinylester pipe stubs.

2. IFS Figure #20-L x 4": 90 degree, cement socket, epoxy vinylester elbow, fabricated with similar
    adhesive, bonded to Series 5000 vinylester pipe stubs.

Product Manufacture Method:
1. Fibercast elbow -- Compression stamped (gunk molded),
    non-lined, using bulk molding compound consisting of random
    and non-continuous chopped fibers and proprietary clays and
    other fillers, with Dow 411 epoxy vinylester resin, or equal, as
    bulk resin.

2. IFS elbow -- Continuous strand filament wound
    construction, incorporating interspersed dual directional
    fabrics, with a 50 mil reinforced surfacing veil/mat liner, and
    Dow 411 epoxy vinylester resin or equal.

Results:
1. Fibercast elbow failed after 30 seconds at 500 psig.
2. IFS elbow did not fail after 60 second dwell at 1400 psig.
Mode of Failure:

1. Fibercast elbow failed by partial tensile of socket at the base of the socket.

2. IFS elbow exhibited no failure. Test aborted after multiple incidents of gasket "blow out" on flanged end closures, at maximum attainable pressure.