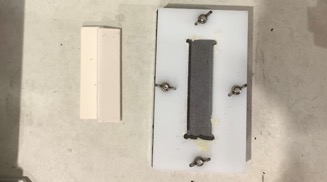
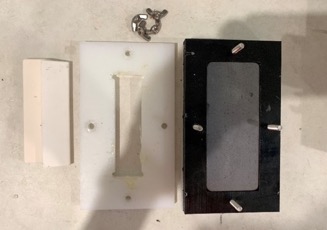
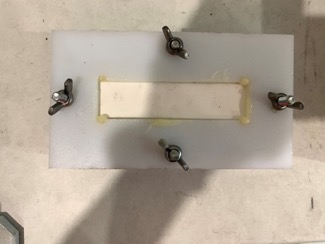
**DIRECT BOND LAGGING - TEST PIECE PROCEDURE**

Test Pieces are to be prepared and tested for each pulley. The following process ensures that the testing is reflective of the lagging application for each pulley, as both the pulley and the test pieces are prepared the same way, at the same time. The steps to prepare the steel surfaces of both the pulley and the test pieces must be done concurrently, and this also applies for each subsequent step of the lagging process. This means when the pulley shell surface is blasted, so are the steel test pieces. When the pulley shell is primed, so are the test pieces and so on. A Lagging Application Procedure should be supplied by the lagging manufacturer, as well as a QA Procedure which includes the preparation of test pieces.

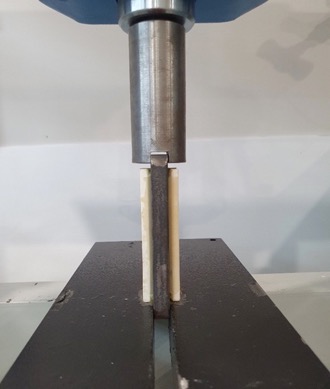
# **Preparing Test Pieces**

* The mild steel test pieces must be made to suit the Test Piece Jig as supplied by the Lagging Manufacturer. The dimensions of the steel test pieces must be 50mm x 120mm x 12mm with 5mm radius on the corners.
* Assemble the adhesion sample test jig (the jig is required to ensure that when the tiles are adhered to the steel test piece they are spaced equally from the edge of the steel). Assemble the components together placing the metal insert in the black pacer and in between the white plates.
* Prepare two adhesion test samples for each pulley.
* Apply adhesive on the surface that will be bonded to the steel test piece of the two tiles which are 125mm x 20mm x 6mm. There must be enough adhesive to form a 1mm thick layer over the whole tile surface, plus provide excess to cover the four corner half circles. Also spread the adhesive into the test jig recess.
* Press the first tile into the jig until adhesive can be seen in the notched out section of each corner, and then wipe off any excess. **THE DIMPLES ON THE CERAMIC TILE MUST BE FACE DOWN**
* Repeat with the second tile on the opposite side of the test jig, so there will be a ceramic tile on each side of the steel test piece.
* The aim is to have a 1mm thick layer of adhesive between the tile and the steel test piece and both tiles to be perfectly flat.
* Stand the test jig on one edge so that both tiles are positioned vertically – this is to reduce the risk of the tiles moving due to gravity.

# **Adhesion Test Process**

* Remove test pieces from sample jig, and position in press as shown below. The ceramic tiles on each side of the test piece must both be in contact with the base plate of the press.

 **A picture containing indoor, white, kitchen, small

Description automatically generated** 

* Fit safety screen (tiles can shatter during the test and are dangerous – do not carry out the test without the safety screen in place).

A picture containing person, man, woman, holding

Description automatically generated

* Pump the hydraulic pack to apply load to the tiles until they break away from the steel test piece.

A picture containing indoor, table, man, kitchen

Description automatically generated

Once the bond fails, read the gauge pressure that the adhesion failure occurred at and calculate result as follows:

Gauge pressure at rupture (MPa) x Ram Area (cm2)

Total Tile surface area (cm2)

**Test Results**

To pass the DBCL adhesion test, the results must be:

|  |  |
| --- | --- |
| Adhesion Test Result | >30Mpa |

If you don’t have access to the required testing equipment, contact the lagging manufacturer for assistance.