

### 4.2.7 Remote Clamp and Stripline Block

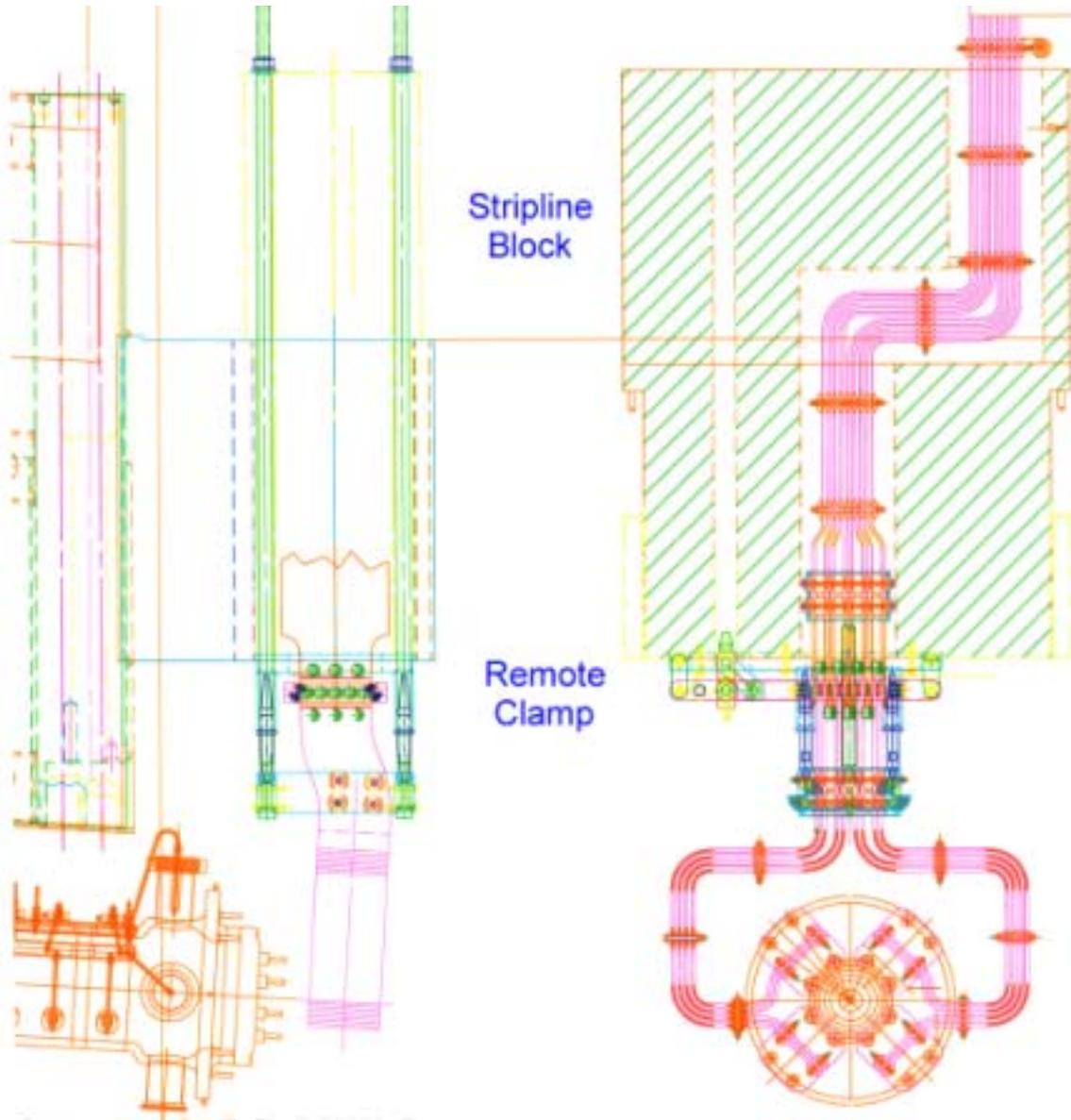
A stripline stub is permanently connected to a horn. This mates to the stripline at the bottom of the module. The remote clamp is used to apply pressure between the two sections of stripline to make a good electrical connection. The remote clamp is mounted on the stripline block, which provides radiation shielding, see **Figure 4.2-18**. The entire stripline block and remote clamp can be lifted out of the module for replacement if the remote clamp fails.

Once the bottom of a module is radioactivated, the replacement of a horn must be done remotely, in the work cell. The remote clamp toggles, and is tightened or released via a long shaft through the shielding. A set of daggers aid in bringing the striplines into proper alignment when a new horn is inserted.

The requirement for clamping pressure is set at 1400 psi. The stripline contact area is 9 sq. in. per layer. Allowing for a reasonable safety factor, the clamp was designed to provide 32000 lbs of force. In a test of the prototype, the actual force exerted was 38000 lbs. Belleville washers serve two functions. They spring the contacts apart when the force is released, and provide a tolerance for minor thickness variations when toggle is in the clamped position. The nominal clearance between stripline contact surfaces during insertion is 0.03 inch, for each of eight surfaces, thus the clamp must close at least 0.24 inch.

Ceramic insulators are used in the remote clamp because of the high radiation environment.

The stripline penetration through the stripline block jogs to prevent line-of-sight from the top of the module to the high radiation area below.



**Figure 4.2-18** Side and end views of the stripline block and remote clamp in place with the horn and module.