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Profile of Indian-Point Cracks Based on 1997 Mid-Range Data

As of the Spring of 2000, there were 9 cracks identified as possibly being in the U-bends in during the 1997 inspection. Of these, 7 have been verified as being present at that time. A listing of these cracks follows:

Row 2 Col 67 of Steam Generator 24 was detected in 1997 outage.

Row 2 Col 5 of Steam Generator 24 ruptured to initiate 2000 outage.

The following three tubes were detected with the mid-range probe in the initial 2000 inspection:

Row 2 Col 87 of Steam Generator 21

Row 2 Col 69 of Steam Generator 24 (Leaked at 5173 psi under pressure test)

Row 2 Col 72 of Steam Generator 24

The following high frequency inspection added the tubes to the defective list:

Row 2 Col 85 of Steam Generator 23

Row 2 Col 4 of Steam Generator 24

Row 2 Col 71 of Steam Generator 24 (Leaked at 2841 - 4500 psi)

Row 2 Col 74 of Steam Generator 24 (Leaked at 5500 psi)

Of these 9 defects, 7 were visible (with hindsight) in the 1997 inspection data. Tube Row 2 Col 4 and tube Row 2 Col 74, both of Steam Generator 24, were questionable in the data, and have not been profiled. The main problem was the high level of noise. This high noise level also made the measurement of the crack profile marginal in many cases. In many cases, not all of the crack that was profiled with the high-frequency probe was able to be detected in the 1997 data.

In Figure 1 the profile of tube row 2, column 85 of Steam Generator 23 is shown. This profile is similar to the one shown of the high-frequency probe in 2000.

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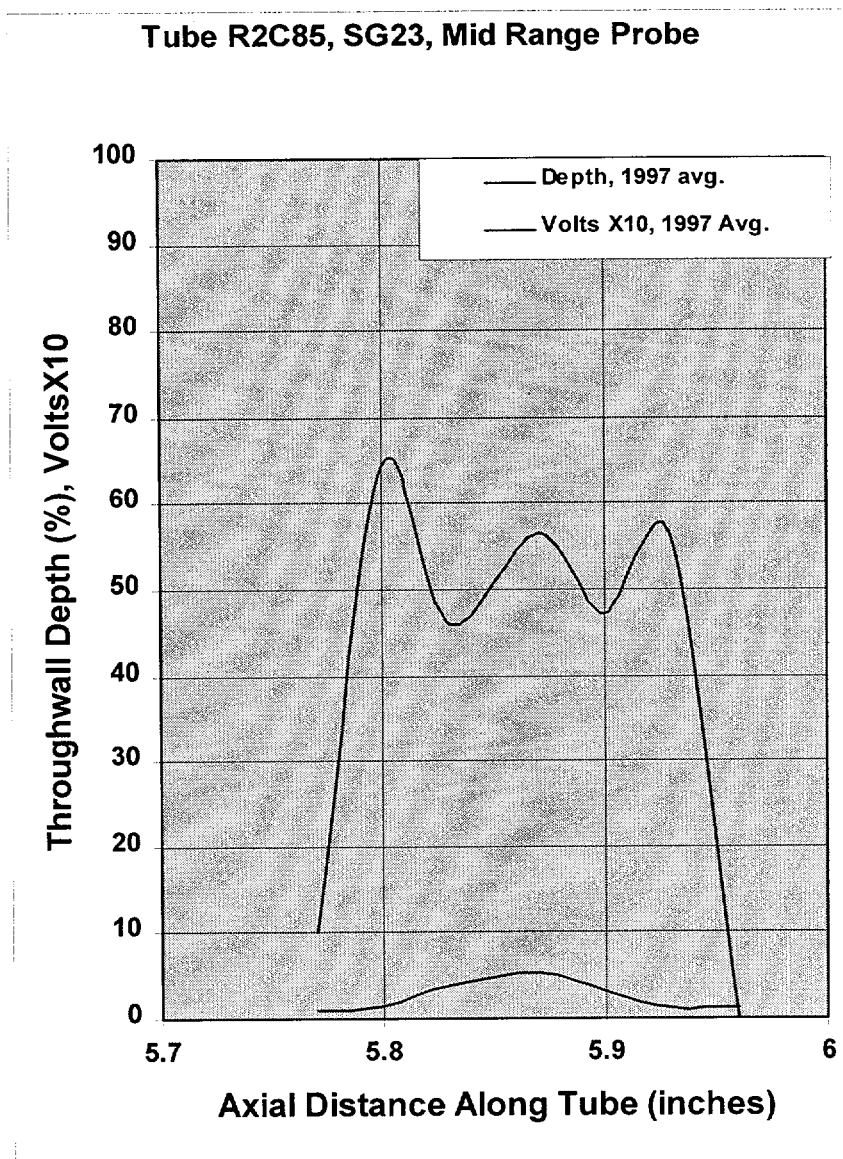


Figure 1 Profile of tube row 2, column 85 of Steam Generator 23

Tube R2C72, SG24, Mid-Range Probe

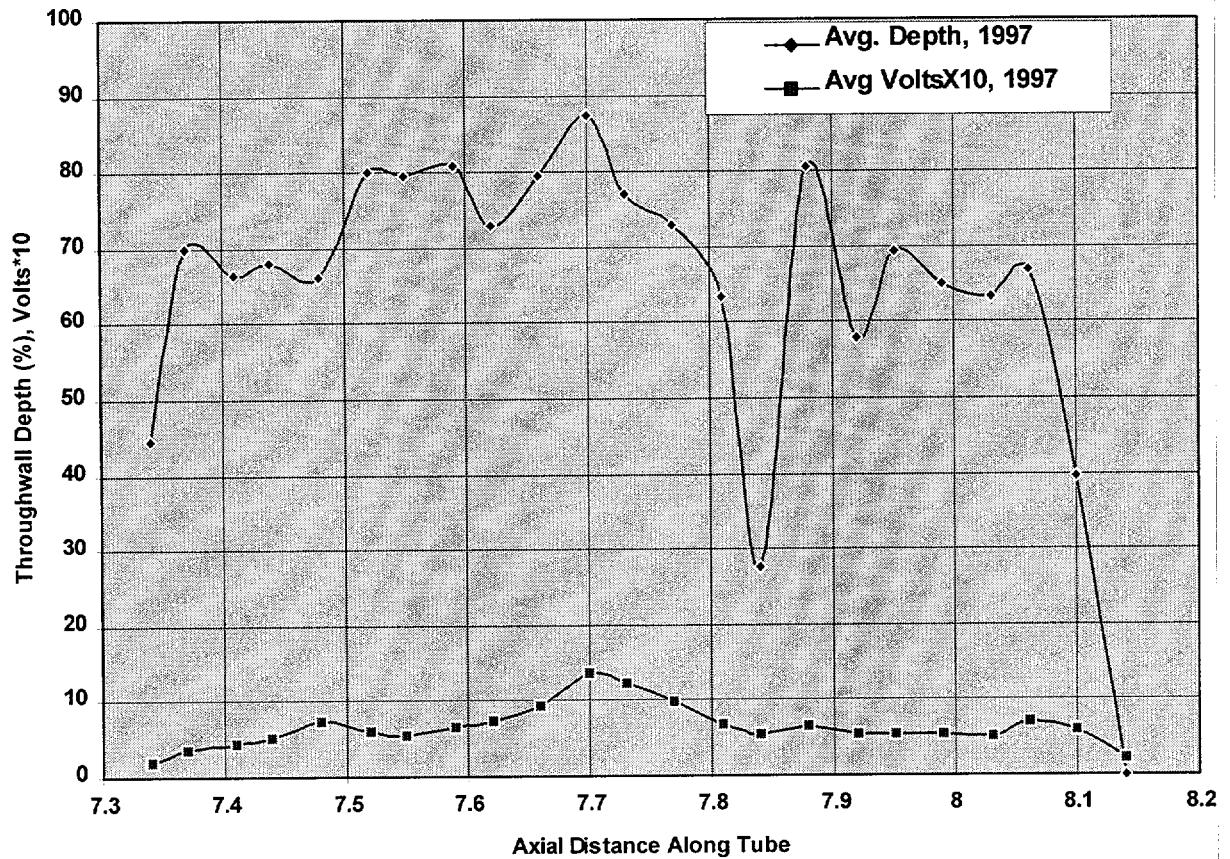


Figure 2 Profile of tube Row 2 Column 72 of Steam Generator 24

Figure 2 shows the profile of tube Row 2 Column 72 of Steam Generator 24

Figure 3 shows a profile of tube Row 2 Column 71 of Steam Generator 24.

Tube R2C71, SG24, Mid-Range Probe

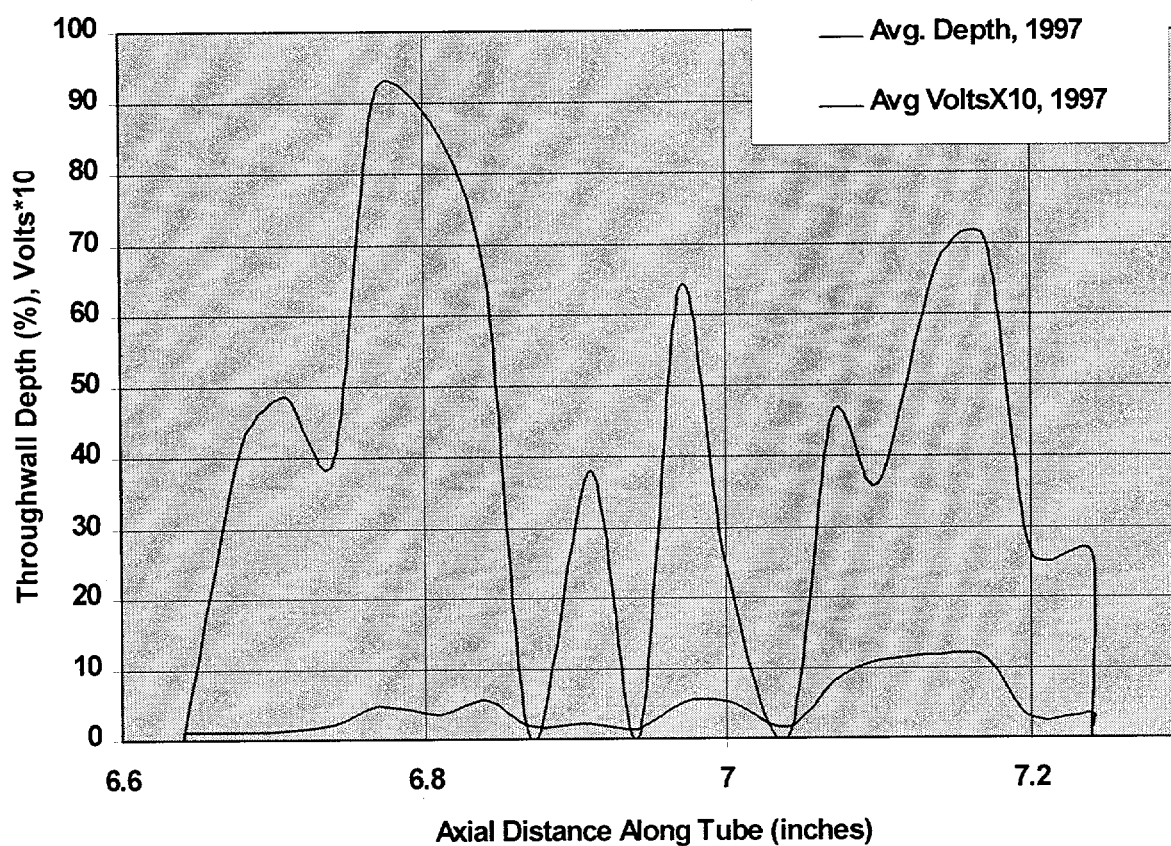


Figure 3 Profile of tube Row 2 Column 71 of Steam Generator 24.

Figure 4 shows a profile of Tube Row 2 Column 69 of Steam Generator 24

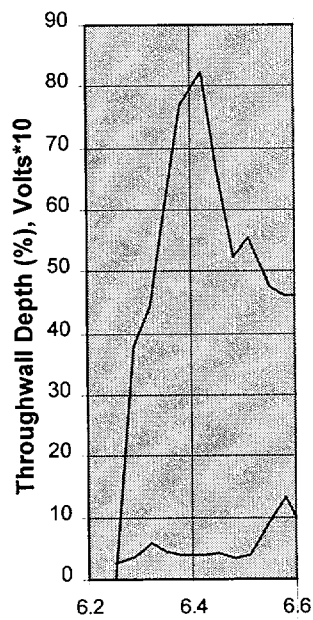


Figure 4 Profile of Tube Row 2 Column 69 of Steam Generator 24

Tube R2C69, SG24, Mid-Range Probe

Tube R2C87, SG24, Mid-Range Probe

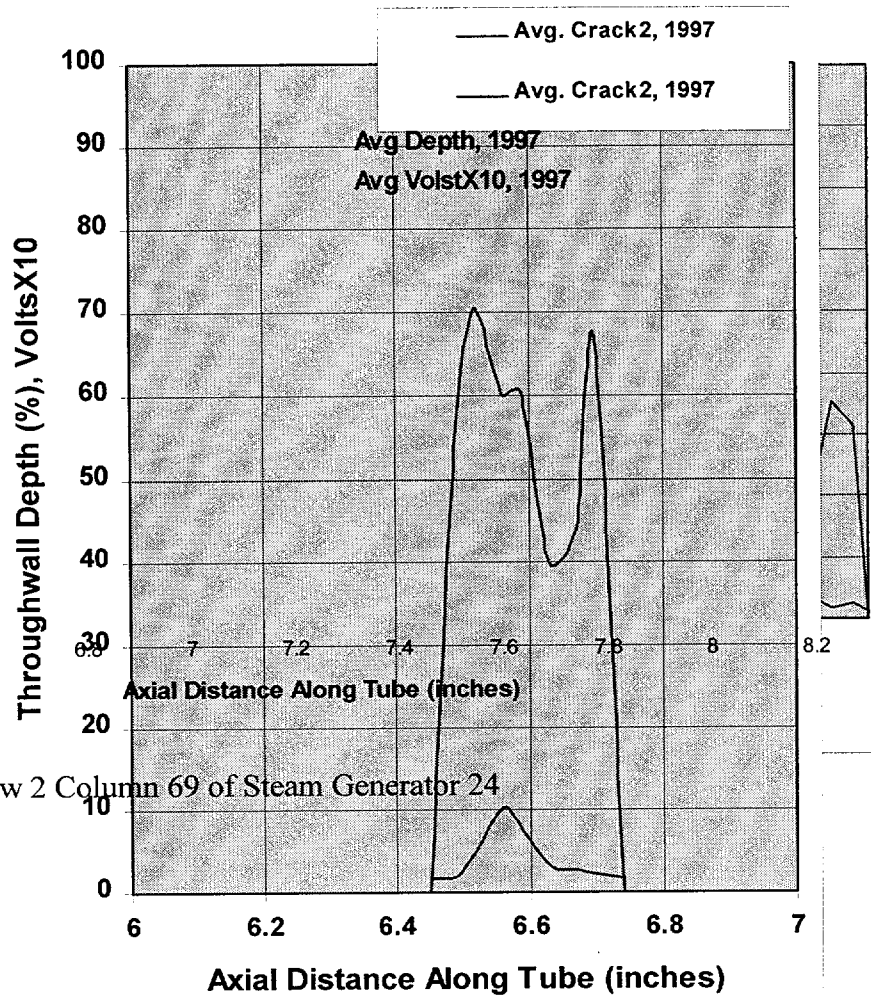


Figure 5 Profile of Tube Row 2 Column 87 of Steam Generator 24.

Figure 5 shows a profile of Tube Row 2 Column 87 of Steam Generator 24. Only one part of the crack is profiled. The rest is in a high noise region.