

Project Learning:

Key Process Points:

- There are 3 main steps to successfully extracting a tube
 - Cut
 - Progressive cuts are best for relieving stress on the winch, blade and tool. 3 passes per cut are recommended.
 - Two parallel cuts(6 passes) approximately 0.3" apart are needed, spiral is acceptable but not crossed or diverged cuts
 - Cuts do not need to penetrate the full wall thickness but deformation must be visible from exterior
 - If cuts diverge or converge before the end of the tube it will be necessary to perform cuts on opposite side of the tube before use of the strip peeler
 - Strip
 - The strip peeler is a one-time use for a tube. It cannot be done twice and must be successful the first time
 - A failure occurs when the strip breaks, leaving a strip only partially removed from the wall (normally occurring halfway down). The broken strip blocks passage for the winch cable
 - Pull
 - Once a strip is removed, the walls are relieved of the compressive stresses lessening the pressure exerted onto the tube wall by the coil fins
 - If a coil is short enough or the tube is loose, the strip remover may pull out the tube without needing the next tool
 - The plug tool is used to extract the remaining portion of the tube with very little damage

Key Tool Points:

- Saw Holder
 - To obtain consistent parallel cuts, a small pin is used to score a groove on the pipe-wall at the desired angle of the next cut. This is done during the first pass to ensure successful operation of the strip peeler
 - The saw is likely to spin randomly if only partial length is embedded and cutting the pipe-wall
 - Straight cuts are achieved with a rigid tool body and a full 10" saw blade with the front and rear teeth cutting 0.010" and 0.040" deep respectively. Depth is measured from final depth of previous cut
- Strip Peeler
 - Clamping onto the strip ensures that the tool fails only if the strip breaks
- Plug Tool
 - The plug will expand the front of the tube if the walls are opened up. Ensure that the tube is still circular before applying tension with the winch