Pipe vibration can be quickly applied with very little preparation.

Typical job duration is less than one day.

Pipe vibration offers a low risk, high reward, first means for your pipe recovery needs.

Results are often immediate, substantially reducing time and effort required to solve stuck problems.

**Workover / Completion Operations**

Free and Recover Rods, Tubing, Screens, Screen Packers, Liners, Retrievable Packers, Bridge Plugs and Anchors

**Coil Tubing Operations**

Recover Stuck Coil and Downhole Members Without Cutting or Damaging the Coil Tubing String
STUCK PIPE RECOVERY USING VIBRATION TECHNOLOGY OSCILLATORS

Oil Field Vibration System

A resonant vibration system for use in oil field tubular extraction applications consists of three basic components: a mechanical oscillator with suspension system for isolating the rig structure, a work string for transmitting vibrational energy, and a stuck member or “fish” to be recovered.

Figure 1 illustrates these components in a well setting. The eccentric weight mechanical oscillator generates an axial sinusoidal force that acts on the work string to create axial vibration and the vibrating work string transmits and delivers power developed at the oscillator to a region where the stuck member is located. The vibrational energy received at the stuck area works to effect the release of the stuck member through the application of large percussive forces, fluidization of granular material, dilation and contraction of the pipe body, and a reduction of wellbore friction or hole drag.

Workover Applications

Any situation where the axial reciprocation of pipe or the use of large tensile, compressive, or percussive forces or where the reduction of pipe to wellbore friction is beneficial may respond favorably to the use of pipe vibration. The process is applied from surface, generally without any down hole intervention, and often provides immediate results.

Figure 2 illustrates a Vibration Technology Oscillator in operation recovering a 10,000 foot scale stuck rod string. On this recent job, a combination string of 7/8” and 3/4” sucker rods was recovered thus avoiding a tedious and often time consuming stripping job with associated risks as well as the potential for considerable rod damage.

Vibration Technology provides equipment and services that are highly effective in recovering stuck pipe in a range of applications including mud, scale, salt, sand, or junk stuck downhole equipment such as:

- Insert Pumps
- Submersible Pumps
- Rods
- Tubing Anchors
- Tubing
- Liners
- Gravel Pack Screens and Packers
- Retrievable Packers
- Bridge Plugs
- Bottom Hole Assemblies
Advantages of Vibration in Coil Tubing Applications

- Quickly and Easily Applied
- No Downhole Intervention
- Reduced Risk
- Simplified Decision Making
- Demonstrated Results

- The coil is not cut so that full well control is maintained and associated costs are eliminated.
- The coil is not worked over the gooseneck so coil fatigue damage is minimized.
- Wireline services along with the attendant risks are not needed.
- The operation is conducted from surface utilizing equipment suspended above the wellbore.
- The coil unit remains in place to assist the vibration operation as well as to immediately recover the coil when it becomes free.
- Pipe vibration can be quickly applied with very little preparation.
- Typical job duration is less than one day.
- Pipe vibration is low risk with respect to further deteriorating the situation.
- Results are often immediate and thus considerable expense and risk can be eliminated in resolving a stuck tubing situation.

Coil Recovery Operations

Well Preparation

Kill the well and stabilize the coil injector head with support legs.

Rig Up and Attachment to Coil

A crane or workover rig is required to support and handle the oscillator and coil string. Oscillator to coil attachment is accomplished by use of friction clamps.

Crane Requirements

Crane should have at least 80 tons lift capacity, boom working height of at least 80 feet, and be equipped with a weight indicator.

Safety Requirements

A personnel basket or lift is required in order to allow work at the top of or above the coil injector head.

The Bottom Line

Vibration Technology offers a unique and demonstrated superior approach to resolving a stuck coil situation. It is easy to apply, can be done very quickly and often produces instant results. The Coil String does not have to be cut in order to apply the vibration process.

Pipe vibration is a proven approach for resolving stuck coil situations. It offers many advantages to cutting the coil and proceeding conventionally. Been there? Done that?

Vibration Technology has successfully recovered stuck pipe and tools from depths of 100 to 18,000 ft.

Make Vibration Technology your first call to resolve any stuck pipe situation.
Vibration Technology, a subsidiary of Layne Christensen Company, specializes in providing pipe vibration services. The company operates proprietary equipment designed specifically for oilfield use and features compact, mobile equipment that is easily transportable, quick to rig-up, and highly effective in providing an efficient oilfield service.

Vibration Technology’s equipment has been designed to operate efficiently within a range of acceptable operational parameters. Our oscillators are designed to induce standing wave resonance that is effective in all down hole situations. Our equipment and methods leverage all aspects of the technology and our innovative coil tubing bail provides for working stuck coil without cutting the coil or causing fatigue wear due to working over the gooseneck.