

YTA

TCT®



Tubular Cutting Tool

Cutting downhole pipes with explosives or chemicals is associated with excessive health, safety and environmental risks, and high permit, transportation, storage and operation costs.

To address this problem, YTA has developed an intelligent, fully automated mechanical **Tubular Cutting Tool TCT®**, that is safe, reliable, easy to deploy, and leaves a very clean cut at the precise depth without damaging adjacent tubulars. It does not involve chemicals or explosives, and is economical and environmentally friendly.

► Description

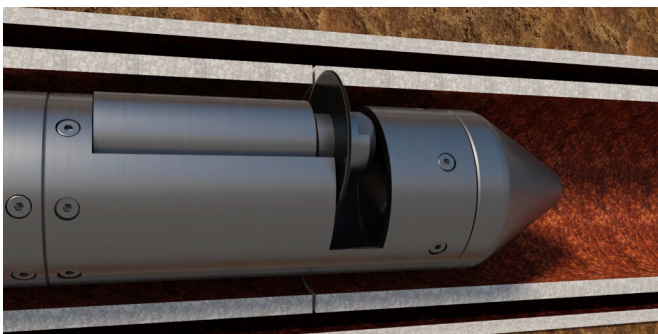
This intelligent (patent granted) TCT® cuts downhole tubulars with a very clean and complete finish, and removes the need for subsequent milling operation and eliminates non-productive time.

During deployment, the cutter is sent downhole on e-line cable, correlated to the target depth, then two sets of anchors are activated and secure the tool in position. Next, the cutting head unit rotates and the cutting blade is swiveled outwards from the blade chamber, engages the pipe wall from inside and starts rotational cutting. After completion of the cut, the blade and the anchors will retrieve respectively and the tool can return to the surface. The top section of the tubular above the cut point can be pulled out of the wellbore, and the section below the cut point can be easily fished out with standard techniques.

TCT® is driven by several electrical motors and can be deployed on industry standard mono-conductor e-line. The depth measurement is achieved through an integrated analogue CCL. The surface system includes a control panel and software. The control panel regulates power supply up to 600V to the cutter, and the software installed onto a laptop enables a full autonomous cutting operation without the need of human intervention, thus significantly reduces human error and prevents the cutting blade being pinched. The well site operator can continuously monitor the cutting process in real time.

TCT® does not use chemicals or explosives and does not require any special permit to store, transport and deploy. It is intelligent, safe, clean, and easy to use.

TCT® saves lives, saves money and saves the environment.



TCT® in action



TCT® horizontal cutting result

► Features

- Electrically powered via industry standard mono-conductor e-line
- Requires no special permit to transport or store: no hazardous substances
- Can cut pipes in either tension or compression
- Can cut various downhole tubular materials
- Leaves very clean cut, making subsequent fishing operation easy and inexpensive
- Can cut both vertically and horizontally
- Can perform multiple cuts in one trip
- Easy to maintain: minimal re-dressing which can be performed at wellsite

► Tool Sizes

- TCT® 2-1/8" (54mm) version cut 2-7/8" to 3-1/2" pipes
- Further size under development to cut 4-1/2" and above sized pipes



YTA team testing TCT®

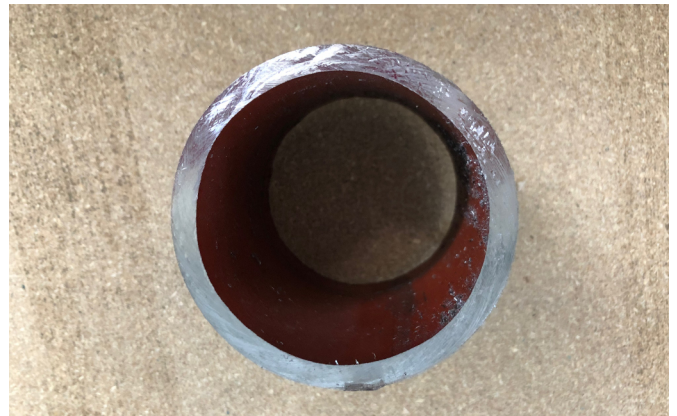
Specification

TCT® 2-1/8" STD

To cut pipe size	69–89mm (2-7/8"~ 3-1/2")
Max wall thickness	16mm (0.55")
Tool OD	54mm (2-1/8")
Cut point from tip of the tool	105mm
Temperature rating	150°C (302°F)
Pressure rating	60MPa (8,700 psi)
Tool length	8.6m (28 ft)
Tool weight	90kg (198 lbs)



TCT® software



TCT® smooth cut result

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Making the energy industry
safer & cleaner