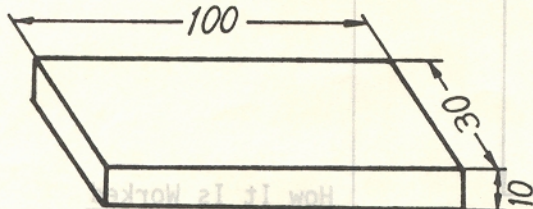


TD Process Application to Dies and Jigs

TD Process
Application Data
No. 8F-1 1/1

Die or Jig	Name	Stopper used in cropping					
	Category	Die (pressing, cold forging, hot forging, die casting, sand molding, powder compacting, rubber molding, plastic molding, glass casting) Cutting tool, Knife, Guide roller, Others ()					
Material	Steel Code	D2	TD	Coating	Cr ₇ C ₃ VC	Treating Condition	
	Heat Treatment	Hardened		Thickness	100 μ	Substrate Hardness	HRC

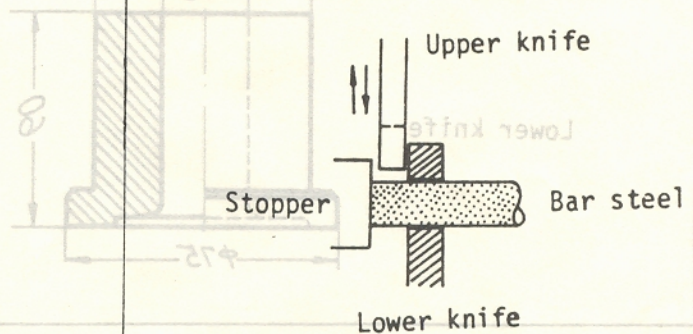
Sketch of Die



Work	Material	AISI 1010		
	Dimension	21.5 φ	Hardness	HrB 90

Sketch of Work

How It Is Worked



Evaluation

Life of stoppers (Shots)

D2 Hardened stoppers

20,000 ~ 35,000

D2 TD treated (Cr₇C₃ coating) stopper

226,000

D2 TD treated (VC coating) stopper

1,000,000 Still usable

Effect

- Increase of life
- Reduction of maintenance cost
- Saving of Lubricants
- Increase of working rate
- Others

Working Condition

Machine	Cropping Machine
Load	
Stroke	
Speed	
Temperature	°C
Lubrication	
Clearance	

Recorded by _____