Shear Slitting Theory

DIENES GROUP
The Slitting World

1.0 BASIC SHEAR SLITTING GEOMETRIES

- Tangential and Wrap Web Paths
- Shear Cut Point
- Shear Angle Function
- Top and Bottom Knife Overlap
- Axial and Radial Run-out

2.0 SHEAR KNIFE BLADES

- Function - Flat and Dished Blades
- Bevels - Single, Double, Double Hollow
- Metallurgy
  - 52100, D2, and other Tool Steels
  - CPM10-V, Carbide Bottoms
- Regrind Effects

3.0 BOTTOM KNIVES

- Function
- Metallurgy

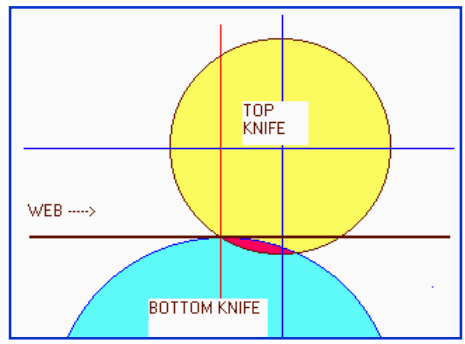
4.0 SHEAR KNIFE HOLDERS

- Horizontal Side Load Force
- Over speed
- Vibration
- Mounting Methods
- Safety

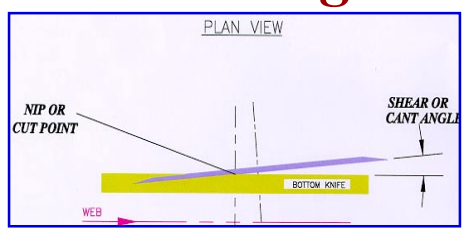
5.0 SHEAR SLITTING DUST

6.0 TROUBLESHOOTING

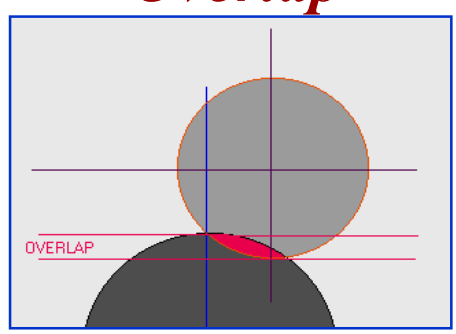
Cut Point



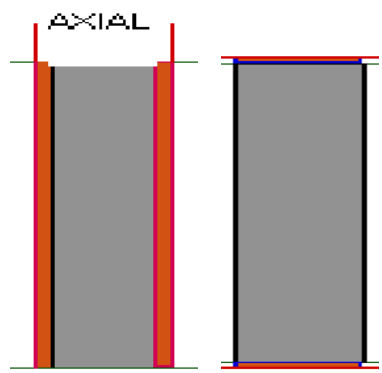
Shear Angle



Overlap



Run-out

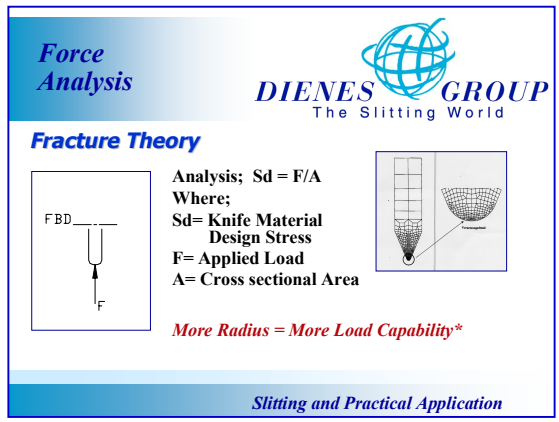


Crush Cutting Theory

DIENES GROUP
The Slitting World

7.0 CRUSH / SCORE CUT SLITTING

- Tangential and Wrap Web Paths
- Crush Cut Affects, Force Analysis
- Knife Blade Angle and Radii
  - Fundamentals
  - Metallurgy
- Anvil Rolls, Hardness, Grooving



8.0 RAZOR SLITTING

- Grooved Roller
- Burst Slitting
- Blade Materials
- Safety

9.0 ADHESIVE SLITTING

- Knife Bevels
- Lubrication
- Heated Rotary Blades
- Blade Coatings

10.0 CRUSH CUTTING DUST

11.0 TROUBLESHOOTING