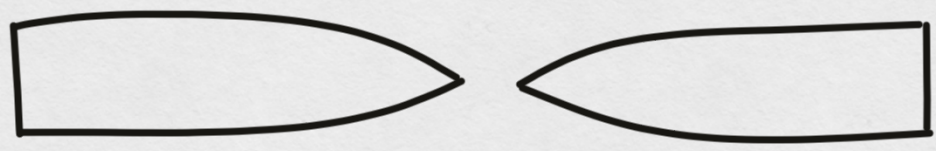


Ductile Fracture

high energy absorption.
extensive pl. def.
slowly cracks

Brittle Fracture

low energy absorption
little to no pl. def.
cracks rapidly.



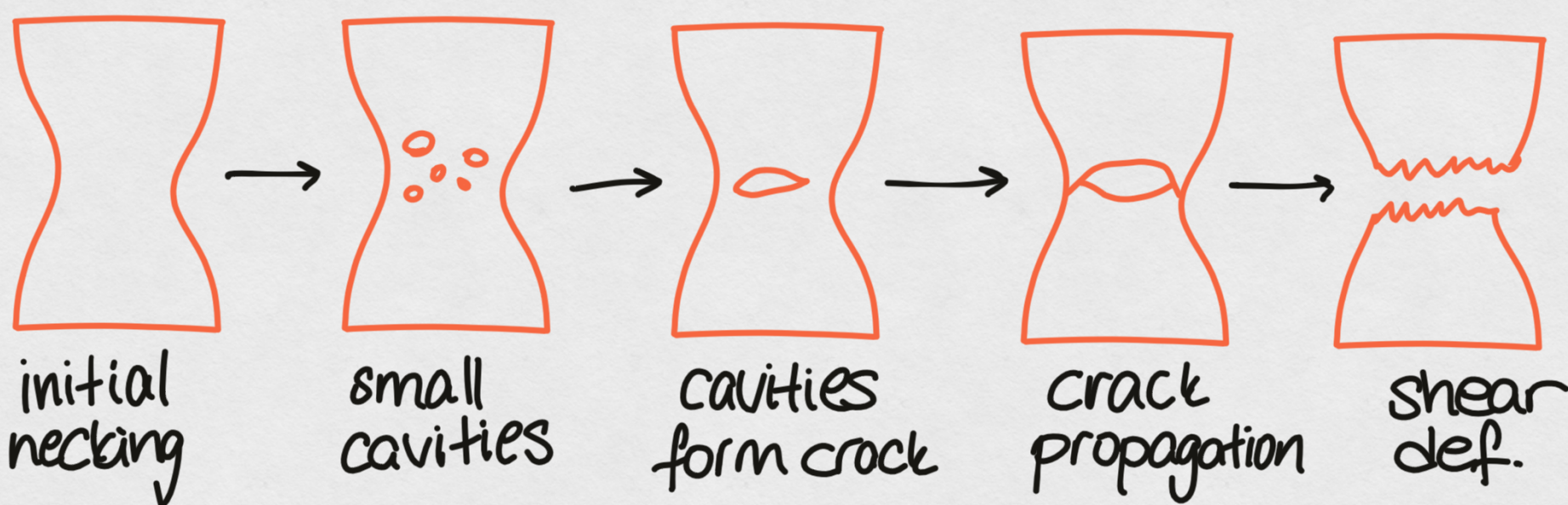
highly ductile



moderately ductile



brittle.



Some brittle cracks have V-shaped chevron.
for brittle:

- cleavage: repeated breaking of bonds along crystallographic planes.
- transgranular (transcrystalline) fracture
 - ↳ cracks pass through grains
- if cracks are along grain boundaries: intergranular.

DUCTILE TO BRITTLE TRANSITION

By Charpy and Izod tests, whether or not a mat. experiences ductile-to-brittle transition

as temperature ↓ behaviour: ductile → brittle.

at high T
more ductile

at low T
more brittle

DBTT is the temp. where it transform from d → b