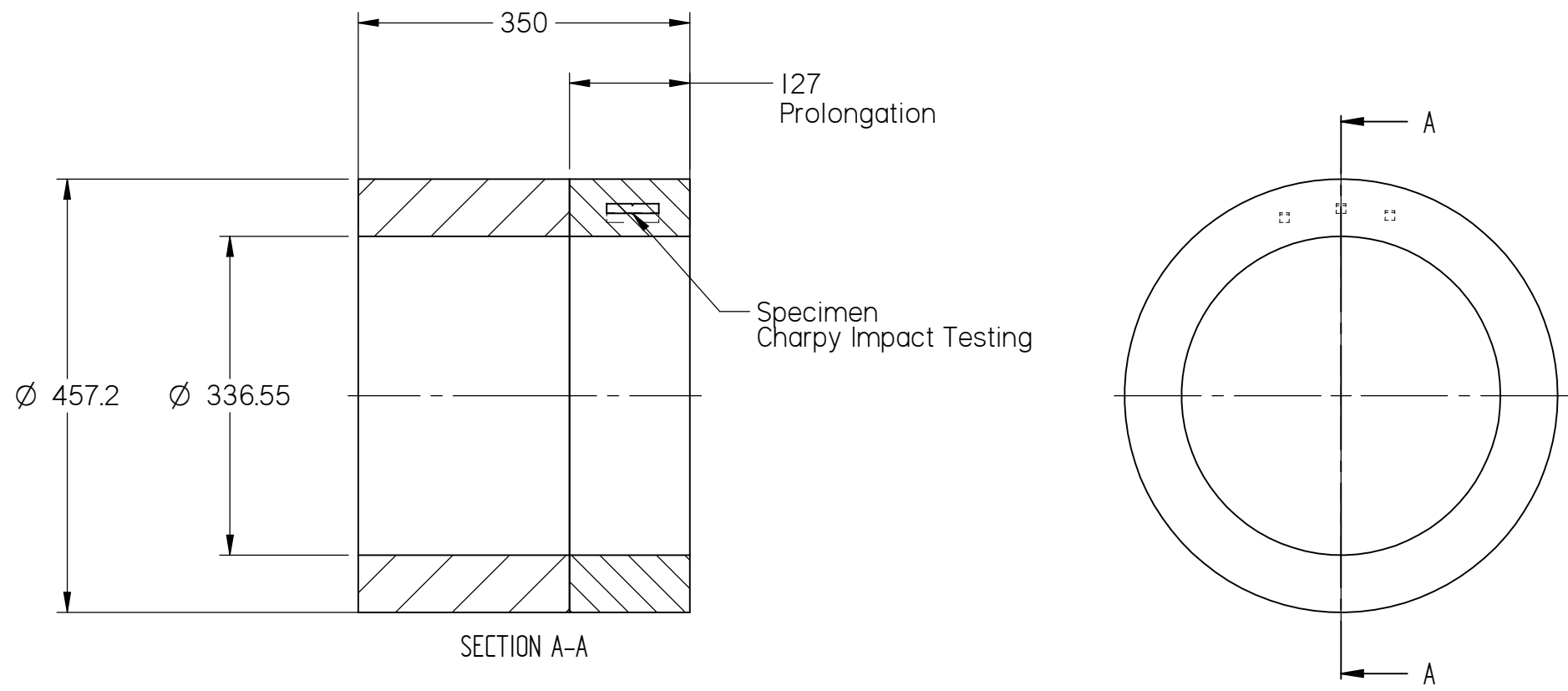


Raw Material Design - SAE 4140



Dimensions in millimeters

Raw Material Certificate

VILLARES GRADE		SIMILAR GRADE	
VL40		SAE 4140	
DIMENSIONS	LENGTH RANGE	DRAWING NUMBER	
457.200 (-)0.000 (+)14.600	7,000 / 13,000		
PRODUCT	HEAT TREATMENT CONDITION	FINISHING	
Round Bar	Stress Relief	Straightened	
PRODUCT LINE	MELTING PROCESS	HEAT	
Forged	ELECTRIC ARC FURNACE + VD	4868774	
CHEMICAL COMPOSITION (% in weight)			
Chemical Composition (% in weight)			
C 0.38	Si 0.17	Mn 0.81	P 0.008
S 0.0165	Cr 0.86	Mo 0.19	Ni 0.21
Cu 0.13	N 0.0049		

Carbon Equivalent: 0.748