



THE CENTRIFUGAL BRAKE HOUSING ACTS AS THE STATIONARY BRAKING SURFACE OF THE CENTRIFUGAL BRAKE. IT IS MANUFACTURED FROM CAST IRON AND HAS A SERIES OF 5mm  $\varnothing$  HOLES AROUND A PCD OF 100 mm BETWEEN THE BORE AND THE OUTSIDE DIAMETER. THE HOLES ARE BOTH FOR WEIGHT REDUCTION AND TO INCREASE THE UNIT'S ABILITY TO LOOSE HEAT THROUGH FORCED CONVECTION. DURING BREAKING, THE TWO COMPOSITE BREAK SHOES MAKE CONTACT WITH THE INSIDE OF THE BREAK DRUM. THE FRICTION BETWEEN THE TWO SURFACES CAUSES THE BREAK ROTOR TO SLOW DOWN AND CONSEQUENTLY LIMIT THE SPEED OF GENERATOR INPUT SHAFT TO WHICH IT IS COUPLED. HEAT IS CREATED DUE TO THE ENERGY LOSSES CAUSED BY FRICTION DURING BREAKING. THE HEAT IS REMOVED VIA FORCED CONVECTION. A STREAM OF AIR IS DIRECTED ONTO THE BREAK ASSEMBLY VIA PORTS IN THE NACELLE HOUSING. THE AIR ABSORBS SOME OF THE HEAT ENERGY AND ESCAPES THROUGH A MESH GRID AT THE REAR OF THE NACELLE HOUSING.

THE RAKE HOUSING OIS MECHANICALLY FASTENED TO THE BRAKE AND GENERATOR PLATFORM WITH 6 M8 BOLTS.

UNIVERSITY OF SOUTHERN QUEENSLAN		UNLESS OTHERWISE SPECIFIED:	NAME		DATE	KH3- 500 WIND TURBINE  TITLE:  BRAKE HOUSING		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± ANGULAR: MACH ±    BEND ± TWO PLACE DECIMAL    ± THREE PLACE DECIMAL    ±	DRAWN	J.KIRSCH	6/10/09			
			CHECKED					
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE    DWG. NO.    REV <b>C</b> 21		
		MATERIAL	COMMENTS:					
NEXT ASSY	USED ON	FINISH						
APPLICATION		DO NOT SCALE DRAWING						
		SCALE: 1:2				SHEET 1 OF 1		