



DEPARTEMEN TEKNIK MESIN
FAKULTAS TEKNIK UNIVERSITAS INDONESIA

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No.	Nama Peralatan	Spesifikasi teknis
1	Pengujian Statik	1 unit Electromechanical Universal Testing Machine max. load 100 kN, merk SCHENK Germany
		1 unit Universal Testing Machine, max test load 200 kN (UPM 200), merk SCHENK Germany
		1 unit Universal Testing Machine, max test load 1000 kN (UPM 1000), merk SCHENK Germany
		1 unit Hydraulic Tensile Testing Machine of Horizontal design for Testing chains & ropes max force 4000 kN, SCHENK Germany
2	Pengujian Dinamik	Hydr. Actuator 25 kN, 100 mm, Q=38 L/min + Accessories, merk SCHENK Germany
		Hydr. Actuator 40 kN, 100 mm, Q=38 L/min + Accessories, merk SCHENK Germany
		Hydr. Actuator 63 kN, 100 mm, Q=38 L/min + Accessories, merk SCHENK Germany
		Hydr. Actuator 100 kN, 100 mm, Q=38 L/min + Accessories, merk SCHENK Germany
		Hydr. Actuator 160 kN, 100 mm, Q=38 L/min + Accessories, merk SCHENK Germany
		Hydr. Actuator 250 kN, 100 mm, Q=38 L/min + Accessories, merk SCHENK Germany
		Hydr. Actuator 400 kN, 100 mm, Q=38 L/min + Accessories, merk SCHENK Germany
		Hydr. Actuator 630 kN, 100 mm, Q=38 L/min + Accessories, merk SCHENK Germany
		Hyd. Rotary Actuator 8000 NM, 100 grad, Q=2x63 L/Min + Accessories, merk SCHENK Germany
		Hyd. Rotary Actuator 16000 NM, 100 grad, Q=2x63 L/Min + Accessories, merk SCHENK Germany
3	Pengujian Creep	2 units Creep/Rupture Tester M3 + Temp. Measurement, merk SATEC USA
4	Uji Tak Rusak	1 portable X-Ray Apparatus K 200
		Dye Penetrant Test, Magnaflux (cleaner, solven, developer)
		UT Thickness merk Krautkramer, probe, accessories
		Magnetic particle Inspection (MPI)
		Eddy current test

5	Analisa Kerusakan	Komposisi kimia material : Spectrometer Metorex 930 SP (16 unsur kimia), X-met
		Uji kekasaran : Equotip portable Hardness Meter
		Metallografi, fraktografi : Grinding, polishing, replica, bahan kimia, mikroskop & kamera digital
6	Komputasi (CAD & CAE)	Autodesk Inventor professional 11, 2009
		SolidWorks 2009
		SAP 2000
		Caesar II COADE
		NX Nastran, Siemens
		Altire hyperwork
		SPiP Image Metrology : Roughness, Grain size analysis
7	Kalibrasi	Dimensi, alat : Gauge block
		Gaya, alat : Load cell cap. 500 N - 2000 kN
		Tekanan, alat : DWT dan pressure transducer
		Suhu, alat : Termocouple tipe B, Silicon bath, Furnace.
9	Pengukuran regangan	alat : strain gage, amplifier, X-Y Recorder, accessories
10	Deteksi surface crack	a. Dye Penetrant : Merk Magnaflux, paket : Penetrant, Developer, Cleaner/Remover
		b. Flourescent Penetrant : Merk Adrox, paket : Penetrant, Developer, Cleaner/Remover
		c. Magnetic Particle Inspection (MPI) : Merk Parker Magnaflux (Yoke Magnetic & Penetrant Magnetic), WCP (White contrast paint)-
		Particle ink (hitam), Particle powder (merah & abu-abu).
		d. Defectometer : Merk Doctor Forster, probe pensil untuk material ferro, non ferro dan austenit
11	Ketebalan lapisan/Galvanis	Alat : Leptoskop merk : Carl deutch, probe, accessories
12	Ketebalan/Thickness	a. Krautkramer DM2, WM2, probe HT 400 & TR, 4 Mhz
		b. Olympus/Epoch type 35 DL , probe, software, accessories.
13	Flaw Detector	a. Krautkramer USL 32, USK 7, probe sudut 45, 60, 70 derajat
		b. Olympus/Epoch type 1000i, probe, software, accessories.
		c. Olympus/Epoch type XT, probe, software, accessories.
14	Ketebalan dinding tube	Merk R & D Tech Olympus MS 5800, USA, probe : Eddy current, ultrasonic
15	Radiografi	a. Merk Philips K 200 portable, max 3/4" tebal metal
		b. Isotop Co 60, range 1.5"-8" tebal metal & tebal beton max 200 cm
		c. Isotop Ir 192, range 0.5" -1.5" tebal metal