



Satuan Acara Pengajaran

ENMT800102 - Manufaktur Lanjut

Pengajar

Prof. Dr. Ir. Dedi Priadi DEA.

Wahyuaji Narottama Putra S.T., M.T.

Dr. Deni Ferdian S.T., M.Sc.

Minggu 1

Materi Pendahuluan: Pembentukan Logam dalam Proses Manufaktur

Media PPT

Referensi 1. John Campbell, Castings, Second Edition, Elsevier Butterwoth-Heinemann, 2004
2. John Campbell, Castings Practice: The Ten Rules of Castings, Elsevier Butterwoth-Heinemann, 2005
3. Hosford W.F and Robert M. Caddel., Metal Forming: Mechanic and Metallurgy, Prentice Hall Inc, 1983
4. Harris, J.N., Mechanical Working of Metals. Theory and Practice, Pergamon Press, 1983
5. Dieter, G.F., Mechanical Metallurgy, Mc- Graw-Hill, 1976
6. Lenel, Powder Metallurgy, Principles and Application, MPIF, 1980
7. German R.M, Powder Metallurgy Science, 1987

Aktivitas Menjelaskan secara umum pembagian proses2 manufaktur material beserta produk2nya

Minggu 2

Materi Cetakan dan Dapur Peleburan

Media

- Referensi**
1. Hosford W.F and Robert M. Caddel., Metal Forming: Mechanic and Metallurgy, Prentice Hall Inc, 1983
 2. Harris, J.N., Mechanical Working of Metals. Theory and Practice, Pergamon Press, 1983
 3. Dieter, G.F., Mechanical Metallurgy, Mc- Graw-Hill, 1976
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Aktivitas

Minggu 3

Materi Gating System & Casting Simulation

Media

- Referensi**
1. John Campbell, Castings, Second Edition, Elsevier Butterworth-Heinemann, 2004
 2. John Campbell, Castings Practice: The Ten Rules of Castings, Elsevier Butterworth-Heinemann, 2005
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Aktivitas

Minggu 4

Materi Pengecoran Aluminium (Aluminum Casting):
Jenis Proses

Media

- Referensi**
1. Hosford W.F and Robert M. Caddel., Metal Forming: Mechanic and Metallurgy, Prentice Hall Inc, 1983
 2. Harris, J.N., Mechanical Working of Metals. Theory and Practice, Pergamon Press, 1983
 3. Dieter, G.F., Mechanical Metallurgy, Mc- Graw-Hill, 1976
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Aktivitas

Minggu 5

Materi Pengecoran Baja Paduan dan Paduan Super (Alloy Steel & Super Alloy Casting)
Pengecoran Khusus dan Masa Depan Proses Pengecoran (Special Casting & Future Trend of Casting)

Media

- Referensi**
1. John Campbell, Castings, Second Edition, Elsevier Butterwoth-Heinemann, 2004
 2. John Campbell, Castings Practice: The Ten Rules of Castings, Elsevier Butterwoth-Heinemann, 2005
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Aktivitas

Minggu 6

Materi Pembentukan logam/metal forming: Klasifikasi proses, Pengaruh parameter proses, Mekanika Pembentukan. Manufaktur berbantuan komputer

Media Perkuliahan tatap muka dan latihan/diskusi. Slide show PPT

- Referensi**
1. Hosford W.F and Robert M. Caddel., Metal Forming: Mechanic and Metallurgy, Prentice Hall Inc, 1983
 2. Harris, J.N., Mechanical Working of Metals. Theory and Practice, Pergamon Press, 1983
 3. Dieter, G.F., Mechanical Metallurgy, Mc- Graw-Hill, 1976
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Aktivitas

Minggu 7

Materi Proses Penempaan: Perkembangan proses, Cacat produk, material mampu tempa
Proses ekstrusi: Mekanika proses dan cacat produk.

Media Tatap muka, diskusi, slide show PPT

- Referensi**
1. John Campbell, Castings, Second Edition, Elsevier Butterwoth-Heinemann, 2004
 2. John Campbell, Castings Practice: The Ten Rules of Castings, Elsevier Butterwoth-Heinemann, 2005
-

Aktivitas

Minggu 8

Materi Penarikan kawat dan Pengerolan logam: Parameter proses, Mampu bentuk, Permasalahan dan cacat proses. Pengerolan panas dan pengerolan dingin

Media Slide show, diskusi, tugas paper

Referensi

1. Hosford W.F and Robert M. Caddel., Metal Forming: Mechanic and Metallurgy, Prentice Hall Inc, 1983
2. Harris, J.N., Mechanical Working of Metals. Theory and Practice, Pergamon Press, 1983
3. Dieter, G.F., Mechanical Metallurgy, Mc- Graw-Hill, 1976

Aktivitas

Minggu 9

Materi Advance proses manufaktur: Large plastic Deformation, Severe Plastic Deformation, Thermo Mechanical Control Process

Media Slide show, tugas paper, diskusi

Referensi

1. John Campbell, Castings, Second Edition, Elsevier Butterwoth-Heinemann, 2004
2. John Campbell, Castings Practice: The Ten Rules of Castings, Elsevier Butterwoth-Heinemann, 2005

Aktivitas Slide show, tugas paper, diskusi

Minggu 10

Materi Penarikan (Drawing)

Media

Referensi

1. Hosford W.F and Robert M. Caddel., Metal Forming: Mechanic and Metallurgy, Prentice Hall Inc, 1983
2. Harris, J.N., Mechanical Working of Metals. Theory and Practice, Pergamon Press, 1983
3. Dieter, G.F., Mechanical Metallurgy, Mc- Graw-Hill, 1976

Aktivitas

Minggu 11

Materi Pengecoran Aluminium (Aluminium Casting) Cacat Cor dan Pencegahannya

Media

- Referensi**
1. John Campbell, Castings, Second Edition, Elsevier Butterwoth-Heinemann, 2004
 2. John Campbell, Castings Practice: The Ten Rules of Castings, Elsevier Butterwoth-Heinemann, 2005
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Aktivitas

Minggu 12

Materi Pembentukan Logam Lembaran (Sheet Metal Forming)

Media

- Referensi**
1. Hosford W.F and Robert M. Caddel., Metal Forming: Mechanic and Metallurgy, Prentice Hall Inc, 1983
 2. Harris, J.N., Mechanical Working of Metals. Theory and Practice, Pergamon Press, 1983
 3. Dieter, G.F., Mechanical Metallurgy, Mc- Graw-Hill, 1976
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Aktivitas

Minggu 13

Materi Besi Cor (Cast Iron): BTK, BTN, ADI

Media

- Referensi**
1. John Campbell, Castings, Second Edition, Elsevier Butterwoth-Heinemann, 2004
 2. John Campbell, Castings Practice: The Ten Rules of Castings, Elsevier Butterwoth-Heinemann, 2005
-

Aktivitas

Minggu 14

Materi Pembentukan Logam Lembaran (Sheet Metal Forming)

Media

- Referensi**
1. Hosford W.F and Robert M. Caddel., Metal Forming: Mechanic and Metallurgy, Prentice Hall Inc, 1983
 2. Harris, J.N., Mechanical Working of Metals. Theory and Practice, Pergamon Press, 1983
 3. Dieter, G.F., Mechanical Metallurgy, Mc- Graw-Hill, 1976
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Aktivitas

Minggu 15

Materi Pemrosesan Thermomekanis(Thermomechanical Processing)

Media

- Referensi**
1. Hosford W.F and Robert M. Caddel., Metal Forming: Mechanic and Metallurgy, Prentice Hall Inc, 1983
 2. Harris, J.N., Mechanical Working of Metals. Theory and Practice, Pergamon Press, 1983
 3. Dieter, G.F., Mechanical Metallurgy, Mc- Graw-Hill, 1976
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Aktivitas

Minggu 16

Materi Ujian Tengah Semester

Pengecoran Baja Paduan dan Paduan Super (Alloy Steel & Super Alloy Casting)

Media

Referensi

Aktivitas

Minggu 17

Materi Pengecoran Baja Paduan dan Paduan Super (Alloy Steel & Super Alloy Casting)

Pengecoran Khusus dan Masa Depan Proses Pengecoran (Special Casting & Future Trend of Casting)

Media

- Referensi**
1. John Campbell, Castings, Second Edition, Elsevier Butterwoth-Heinemann, 2004
 2. John Campbell, Castings Practice: The Ten Rules of Castings, Elsevier Butterwoth-Heinemann, 2005
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Aktivitas

Minggu 18

Materi Ujian tengah Semester

Media

Referensi

Aktivitas

Minggu 19

Materi Karakterisasi Serbuk

Pra Kompaksi:
Mixing, Blending, Alloying, Lubricating

Media

- Referensi**
1. Lenel, Powder Metallurgy, Principles and Application, MPIF, 1980
 2. German R.M, Powder Metallurgy Science, 1987
-

Aktivitas

Minggu 20

Materi Proses Kompaksi

Media

- Referensi**
1. Lenel, Powder Metallurgy, Principles and Application, MPIF, 1980
 2. German R.M, Powder Metallurgy Science, 1987
-

Aktivitas

Minggu 21

Materi Proses Penyinteran (Sintering Process)

Media

Referensi 1. Lenel, Powder Metallurgy, Principles and Application, MPIF, 1980
2. German R.M, Powder Metallurgy Science, 1987

Aktivitas

Minggu 22

Materi Aplikasi Metalurgi Serbuk

Media

Referensi 1. Lenel, Powder Metallurgy, Principles and Application, MPIF, 1980
2. German R.M, Powder Metallurgy Science, 1987

Aktivitas

Minggu 23

Materi Tugas dan Presentasi Proses Metalurgi Serbuk (Powder Metallurgy)

Media

Referensi 1. Lenel, Powder Metallurgy, Principles and Application, MPIF, 1980
2. German R.M, Powder Metallurgy Science, 1987

Aktivitas

Minggu 24

Materi Ujian Proses Metalurgi Serbuk (Powder Metallurgy)

Media

Referensi 1. Lenel, Powder Metallurgy, Principles and Application, MPIF, 1980
7. German R.M, Powder Metallurgy Science, 1987

Aktivitas
