



Satuan Acara Pengajaran

ENMT800011 - Peralatan Mekanika Industri

Pengajar

Dr. Dwi Marta Nurjaya S.T., M.T.

Prof. Dr. Ir. Winarto M.Sc

Tujuan Perkuliahan

Mahasiswa mampu menjelaskan prinsip dasar, jenis dan aplikasi peralatan mekanik di industri seperti peralatan pipa pengalir (pipeline), peralatan pembangkit daya (boiler dan turbin), peralatan penukar kalor (heat exchanger) serta disain material yang dipakai serta kode (standard) yang diacu.

Minggu 1

Materi INTRODUKSI:
-Penjelasan SAP MK Peralatan Mekanik Industri
-Introduksi Tentang Peralatan Mekanik Industri

Media LCD & SCELE

Referensi 1. Peter Smith, Piping Materials Selection & Applications, Gulf Professional Publishing, Elsevier, 2005
2. Mohinder Nayyar, "Piping Handbook", 7th Ed., McGraw-Hill Professional; 1999, ISBN: 0070471061
3. Tyler G. Hicks, Power Plant Evaluation & Design Reference Guide, McGraw Hill, 1986
4. Saranamutto et. al., Gas Turbine Theory, 5th Ed., Prentice Hall, 2001
5. Smith Eric, Thermal Design of Heat Exchanger, Jon Willey & Son, 1996, New York.

Aktivitas Kuliah Tatap Muka

Minggu 2

Materi	Piping System
Media	LCD & SCELE
Referensi	<ol style="list-style-type: none"> 1. Peter Smith, Piping Materials Selection & Applications, Gulf Professional Publishing, Elsevier, 2005 2. Mohinder Nayyar, "Piping Handbook", 7th Ed., McGraw-Hill Professional; 1999, ISBN: 0070471061 3. Tyler G. Hicks, Power Plant Evaluation & Design Reference Guide, McGraw Hill, 1986 4. Saranavamutto et. al., Gas Turbine Theory, 5th Ed., Prentice Hall, 2001 5. Smith Eric, Thermal Design of Heat Exchanger, Jon Willey & Son, 1996, New York.
Aktivitas	TATAP MUKA & TUGAS HOMEWORK

Minggu 3

Materi	Standard API 1104 -1-5 of 15 Sections
Media	LCD & SCELE
Referensi	<ol style="list-style-type: none"> 1. Peter Smith, Piping Materials Selection & Applications, Gulf Professional Publishing, Elsevier, 2005 2. Mohinder Nayyar, "Piping Handbook", 7th Ed., McGraw-Hill Professional; 1999, ISBN: 0070471061 3. Tyler G. Hicks, Power Plant Evaluation & Design Reference Guide, McGraw Hill, 1986 4. Saranavamutto et. al., Gas Turbine Theory, 5th Ed., Prentice Hall, 2001 5. Smith Eric, Thermal Design of Heat Exchanger, Jon Willey & Son, 1996, New York.
Aktivitas	TATAP MUKA & TUGAS HOMEWORK

Minggu 4

Materi	Standard API 1104 6 - 10 of 15 Sections
Media	LCD & SCELE

- Referensi**
1. Peter Smith, Piping Materials Selection & Applications, Gulf Professional Publishing, Elsevier, 2005
 2. Mohinder Nayyar, "Piping Handbook", 7th Ed., McGraw-Hill Professional; 1999, ISBN: 0070471061
 3. Tyler G. Hicks, Power Plant Evaluation & Design Reference Guide, McGraw Hill, 1986
 4. Saranavamutto et. al., Gas Turbine Theory, 5th Ed., Prentice Hall, 2001
 5. Smith Eric, Thermal Design of Heat Exchanger, Jon Willey & Son, 1996, New York.
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Minggu 5

Materi Standard API 1104
11?15 of 15 Sections

Media LCD & SCELE

- Referensi**
1. Peter Smith, Piping Materials Selection & Applications, Gulf Professional Publishing, Elsevier, 2005
 2. Mohinder Nayyar, "Piping Handbook", 7th Ed., McGraw-Hill Professional; 1999, ISBN: 0070471061
 3. Tyler G. Hicks, Power Plant Evaluation & Design Reference Guide, McGraw Hill, 1986
 4. Saranavamutto et. al., Gas Turbine Theory, 5th Ed., Prentice Hall, 2001
 5. Smith Eric, Thermal Design of Heat Exchanger, Jon Willey & Son, 1996, New York.
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Minggu 6

Materi API-620/650
Design and Construction of large welded low pressure storage tank, Large size storage tank

Media LCD & SCELE

- Referensi**
1. Peter Smith, Piping Materials Selection & Applications, Gulf Professional Publishing, Elsevier, 2005
 2. Mohinder Nayyar, "Piping Handbook", 7th Ed., McGraw-Hill Professional; 1999, ISBN: 0070471061
 3. Tyler G. Hicks, Power Plant Evaluation & Design Reference Guide, McGraw Hill, 1986
 4. Saranavamutto et. al., Gas Turbine Theory, 5th Ed., Prentice Hall, 2001
 5. Smith Eric, Thermal Design of Heat Exchanger, Jon Willey & Son, 1996, New York.
-

Aktivitas TATAP MUKA & TUGAS HOMEWORK

Minggu 7

Materi API-653
Tank Inspection, Repair, Alteration, and Reconstruction

Media LCD & SCELE

- Referensi**
1. Peter Smith, Piping Materials Selection & Applications, Gulf Professional Publishing, Elsevier, 2005
 2. Mohinder Nayyar, "Piping Handbook", 7th Ed., McGraw-Hill Professional; 1999, ISBN: 0070471061
 3. Tyler G. Hicks, Power Plant Evaluation & Design Reference Guide, McGraw Hill, 1986
 4. Saranavamutto et. al., Gas Turbine Theory, 5th Ed., Prentice Hall, 2001
 5. Smith Eric, Thermal Design of Heat Exchanger, Jon Willey & Son, 1996, New York.
-

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Minggu 8

Materi Boiler & Pressure Vessel

Media LCD & SCELE

- Referensi**
1. Peter Smith, Piping Materials Selection & Applications, Gulf Professional Publishing, Elsevier, 2005
 2. Mohinder Nayyar, "Piping Handbook", 7th Ed., McGraw-Hill Professional; 1999, ISBN: 0070471061
 3. Tyler G. Hicks, Power Plant Evaluation & Design Reference Guide, McGraw Hill, 1986
 4. Saranavamutto et. al., Gas Turbine Theory, 5th Ed., Prentice Hall, 2001
 5. Smith Eric, Thermal Design of Heat Exchanger, Jon Willey & Son, 1996, New York.
-

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Minggu 9

Materi Standard Related Pressure Vessel

Media LCD & SCELE

- Referensi**
1. Peter Smith, Piping Materials Selection & Applications, Gulf Professional Publishing, Elsevier, 2005
 2. Mohinder Nayyar, "Piping Handbook", 7th Ed., McGraw-Hill Professional; 1999, ISBN: 0070471061
 3. Tyler G. Hicks, Power Plant Evaluation & Design Reference Guide, McGraw Hill, 1986
 4. Saranavamutto et. al., Gas Turbine Theory, 5th Ed., Prentice Hall, 2001
 5. Smith Eric, Thermal Design of Heat Exchanger, Jon Willey & Son, 1996, New York.
-

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Minggu 10

Materi Standard : ASME Section VIII (1)

Media LCD & SCELE

- Referensi**
1. Peter Smith, Piping Materials Selection & Applications, Gulf Professional Publishing, Elsevier, 2005
 2. Mohinder Nayyar, "Piping Handbook", 7th Ed., McGraw-Hill Professional; 1999, ISBN: 0070471061
 3. Tyler G. Hicks, Power Plant Evaluation & Design Reference Guide, McGraw Hill, 1986
 4. Saranavamutto et. al., Gas Turbine Theory, 5th Ed., Prentice Hall, 2001
 5. Smith Eric, Thermal Design of Heat Exchanger, Jon Willey & Son, 1996, New York.
-

Aktivitas TATAP MUKA & TUGAS HOMEWORK

Minggu 11

Materi Standard : ASME Section VIII (2)

Media LCD & SCELE

Referensi

1. Peter Smith, Piping Materials Selection & Applications, Gulf Professional Publishing, Elsevier, 2005
2. Mohinder Nayyar, "Piping Handbook", 7th Ed., McGraw-Hill Professional; 1999, ISBN: 0070471061
3. Tyler G. Hicks, Power Plant Evaluation & Design Reference Guide, McGraw Hill, 1986
4. Saranavamutto et. al., Gas Turbine Theory, 5th Ed., Prentice Hall, 2001
5. Smith Eric, Thermal Design of Heat Exchanger, Jon Willey & Son, 1996, New York.

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Minggu 12

Materi Boiler & Pressure Vessel Fabrication

Media LCD & SCELE

Referensi

1. Peter Smith, Piping Materials Selection & Applications, Gulf Professional Publishing, Elsevier, 2005
2. Mohinder Nayyar, "Piping Handbook", 7th Ed., McGraw-Hill Professional; 1999, ISBN: 0070471061
3. Tyler G. Hicks, Power Plant Evaluation & Design Reference Guide, McGraw Hill, 1986
4. Saranavamutto et. al., Gas Turbine Theory, 5th Ed., Prentice Hall, 2001
5. Smith Eric, Thermal Design of Heat Exchanger, Jon Willey & Son, 1996, New York.

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Minggu 13

Materi Invited Guest Lecture with regarding with Pressure Vessel & Boiler or heat exchanger

Media LCD & SCELE

- Referensi**
1. Peter Smith, Piping Materials Selection & Applications, Gulf Professional Publishing, Elsevier, 2005
 2. Mohinder Nayyar, "Piping Handbook", 7th Ed., McGraw-Hill Professional; 1999, ISBN: 0070471061
 3. Tyler G. Hicks, Power Plant Evaluation & Design Reference Guide, McGraw Hill, 1986
 4. Saranavamutto et. al., Gas Turbine Theory, 5th Ed., Prentice Hall, 2001
 5. Smith Eric, Thermal Design of Heat Exchanger, Jon Willey & Son, 1996, New York.
-

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Minggu 14

Materi Tugas Kelompok Mengenai Pengetahuan dan Aplikasi Pressure Vessel & Boiler

Media LCD & SCELE

- Referensi**
1. Peter Smith, Piping Materials Selection & Applications, Gulf Professional Publishing, Elsevier, 2005
 2. Mohinder Nayyar, "Piping Handbook", 7th Ed., McGraw-Hill Professional; 1999, ISBN: 0070471061
 3. Tyler G. Hicks, Power Plant Evaluation & Design Reference Guide, McGraw Hill, 1986
 4. Saranavamutto et. al., Gas Turbine Theory, 5th Ed., Prentice Hall, 2001
 5. Smith Eric, Thermal Design of Heat Exchanger, Jon Willey & Son, 1996, New York.
-

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Minggu 15

Materi Presentasi & Kumpulkan Paper Kelompok

Media LCD & SCELE

- Referensi**
1. Peter Smith, Piping Materials Selection & Applications, Gulf Professional Publishing, Elsevier, 2005
 2. Mohinder Nayyar, "Piping Handbook", 7th Ed., McGraw-Hill Professional; 1999, ISBN: 0070471061
 3. Tyler G. Hicks, Power Plant Evaluation & Design Reference Guide, McGraw Hill, 1986
 4. Saranavamutto et. al., Gas Turbine Theory, 5th Ed., Prentice Hall, 2001
 5. Smith Eric, Thermal Design of Heat Exchanger, Jon Willey & Son, 1996, New York.

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