**TALAT**
Training in Aluminium Application Technologies

# General Table of Contents
**(Grey shading = new lectures)**

# 1000 Aluminium Materials Technology (AMT),
**(21 modules, 495 pages, 451 figures, 28 text files, 21 overhead files)**

# 2000 Aluminium Design (AD)

**(65 modules, 1369 pages, 819 figures, 77 text files, 34 overhead files)**

# 2000 Aluminium Design (AD, following 1)

|  | Pages / Figures |
|---|---|
| **2300 Static Design** | 1/0 |
| 2301 Design of members | 125/92 |
| 2301 Design of Members examples | 2/0 |
| 1. Example 3.1 Deflection of class 4 cross section | 5/0 |
| 2. Example 4.1 : Bending moment resistance of open cross section with closed part | 7/0 |
| 3. Example 4.2 : Hollow cross section (polygon) | 5/0 |
| 4. Example 4.3 : Bending moment resistance of welded hollow section with outstands. Class 2 cross section | 10/0 |
| 5. Example 4.4 : Bending moment resistance of welded hollow section with outstands. Class 4 cross section | 10/0 |
| 6. Example 5.1 : Axial force resistance of square hollow section | 2/0 |
| 7. Example 5.2 : Axial force resistance of symmetric hollow extrusion | 4/0 |
| 8. Example 5.3 : Resistance of cross section with radiating outstands | 6/0 |
| 9. Example 5.4 : Axial force resistance of channel cross section, | 7/0 |
| 10. Example 5.5 : Axial force resistance of laced column | 3/0 |
| 11. Example 5.6 : Axial force resistance of orthotropic plate. Open or closed stiffeners | 5/0 |
| 12. Example 5.7 : Axial force resistance of orthotropic double-skin plate | 9/0 |
| 13. Example 6.1 – 6.6 : Shear resistance of webs without and with stiffeners | 11/0 |
| 14. Example 6.7 : Shear force resistance of orthotropic plate. Open or closed stiffeners | 6/0 |
| 15. Example 6.8 : Shear force resistance of orthotropic double-skin plate | 9/0 |
| 16. Example 7.1 : Concentrated force | 4/0 |
| 17. Example 8.1 : Torsion constants for open cross section | 6/0 |
| 18. Example 8.2 : Torsion constants for hollow cross section | 3/0 |
| 19. Example 8.3 : Torsion constants for deck profile | 3/0 |
| 20. Example 9.1 : Tension force and bending moment | 6/0 |
| 21. Example 9.2 : Beam-column with rectangular hollow section | 4/0 |
| 22. Example 9.3 : Beam-column with eccentric load | 6/0 |
| 23. Example 9.4 : Beam-column with cross weld | 7/0 |
| 24. Example 10.1 : Transverse bending of unsymmetrical flange | 4/0 |
|  | Total : **282/92** |

# 2000 Aluminium Design (AD, following 2)

# 3000 Aluminium Machining and Forming (AMF)
**(32 modules, 585 pages, 597 figures, 38 text files, 32 overhead files)**

# 3000 Aluminium Machining and Forming (AMF, following 1)

|  | Pages / Figures |
|---|---|
| **3800 Superplastic Forming of Aluminium Sheet** | 1/0 |
| 3801 Manufacturing examples and fundamentals | 14/20 |
| 3802 Physical mechanism of superplasticity 5/8 | 7/8 |
| 3803 Process technologies | 15/21 |
| 3804 Superplastic alloys | 5/5 |
| 3805 Combination of superplastic forming and diffusion bonding | 7/6 |
|  | Total : **49/60** |

# 4000 Aluminium Joining Technology (AJT)
### (23 modules, 303 pages, 321 figures, 27 text files, 23 overhead files)

# 5000 Aluminium Surface Technology (AST)

**(11 modules, 188 pages, 130 figures, 15 text files, 10 overhead files)**

|  | Pages / Figures |
|---|---|
| **5100 Introduction Lectures on Aluminium Surface Treatment** | 1/0 |
| 5101 Surface technology of aluminium alloys | 13/10 |
| 5102 Reactivity of aluminium in aqueous solutions | 13/10 |
| 5103 Forms of corrosion | 20/11 |
| 5104 Prevention of aluminium corrosion | 14/9 |
| 5105 Surface treatment of aluminium | 15/15 |
| **5200 Advanced Lectures on Surface Treatment Technologies** | 1/0 |
| 5201 Pre-treatment of aluminium surface | 12/0 |
| 5202 Conversion coatings | 9/1 |
| 5203 Anodising of aluminium | 27/24 |
| 5204 Organic coating of aluminium | 16/8 |
| 5205 Plating on aluminium | 19/23 |
| **5300 Special Lectures on Aluminium Surface Treatments** | 1/0 |
| 5301 Coil-Coating of Aluminium | 27/19 |
| | Total **188/130** |

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Total for the complete TALAT CD-ROM version 2.0:

**152 modules, 2940 pages, 2318 figures**