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5.4 Production of polymer parts; 5.5 Learning points from Chapter 5; 6. Component assembly materials joining technology; 6.1 Introduction; 6.2 Welding; 6.3 Adhesive bonding; 6.4 Mechanical fastening; 6.5 Learning points from Chapter 6; 7. Corrosion and protection of the automotive structure; 7.1 Introduction; 7.2 Relevant corrosion processes; 7.3 Effective design principles
7.4 Materials used for protection of the body structure7.5 Empirical vehicle and laboratory comparisons; 7.6 An introduction to electrochemical methods; 7.7 Learning points from Chapter N; 8. Environmental considerations; 8.1 Introduction; 8.2 Effect of body mass and emissions control; 8.3 Life cycle analysis (LCA); 8.4 Recycling and ELV considerations; 8.5 Hygiene; 8.6 BIW design for safety; 8.7 Learning points from Chapter 8; 9. Future trends in automotive body materials; 9.1 Introduction; 9.2 Factors influencing material change in the future - trends and requirements
9.3 Combined effect of above factors on materials utilization within 'expected' and 'accelerated' timescales9.4 Learning points from Chapter 9; index

Sommario/riassunto

The selection of automobile body materials is fundamental to the choice of fabrication method, and the characteristics and performance of the final vehicle or component. The factors behind these choices comprise some of the key technological and design issues facing automotive engineers today. Materials for Automobile Bodies presents detailed up-to-date information on material technologies for the automobile industry, embracing steels (including high-strength steels) aluminium, plastics, magnesium, hydro-forming and composite body panels. Coverage also includes: materials processing;