REPORT ON ALUMINIUM COMPOSITE PANELS (ACP) PROJECT

ACP Industry Scenario and Scope for New Units
Aluminium Composite Panels (ACP) are mainly light-weight composite material consisting of two pre.finished aluminium cover sheets heat-bonded (laminated) to a core made of polyethylene plastic material, available in 3mm, 4mm, and 6mm thicknesses after finishing and can be curved and bent to form corners. These panels are used widely as exterior covering of commercial buildings and corporate houses. While adding to aesthetic beauty of the structure, they are also resistant to acid, alkali salt spray, pollution and provide good thermal as well as sound insulation. These Panels are widely used due easy maintenance in almost any kind of climate through normal wash with water and mild detergent that ensures long lasting performance.

There are about 25 brands of ACP available in the Indian market. Most of ACP manufacturers are now catering to projects directly. The ACP manufacturers are in the process of creating awareness among end users and establishing their network like plywood sales. The industry is making plywood dealers aware about the uses and application of ACP as they are the one who are directly related.
The expected market potential of aluminium panel sheets used in ACP is about 400 million sq. ft. per annum. The ACP market is growing at the rate of 30 per cent per annum and is expected to grow threefold in another five years. Hence market prospects for ACP are considered to be highly encouraging, providing good scope for existing units and for establishment of new units.

Needless to say, the actual cost of project would depend upon the site selected for the project, the land cost, the type and size of buildings considered, the facilities and features proposed, the sophistication of technologies and equipments contemplated. Therefore, the entrepreneurs must take into account all these factors while developing the concept of the proposed project. Entrepreneurs may have to modify the basic project parameters as presented in this report to arrive at realistic estimates of cost and profitability.

**Report Coverage:**
The report discusses in detail, on market prospects for aluminium composite panels, their specifications, accessories, technical aspects for manufacture and application of these panels along with project aspects for a suitable production capacity. Detailed financial feasibility evaluations for establishing an aluminium composite panel project is also included.

**Cost of the report:**
This report is available at a price of Rs.16,000/- (including 10.30 % service tax and domestic courier charges) per copy. Kindly send us a Demand Draft for this amount favouring ITCOT Consultancy and Services Ltd., payable at Chennai.
# CONTENTS OF THE REPORT

Preface .................................................................................................................. 5

1.0 PROJECT HIGHLIGHTS .................................................................................. 6

2.0 INTRODUCTION TO ALUMINIUM COMPOSITE PANELS ............................... 9
   2.1 ABOUT ALUMINIUM COMPOSITE PANEL .................................................. 9
   2.2 APPEARANCE ................................................................................................. 12
   2.3 STRUCTURAL CAPABILITY .............................................................................. 12
   2.4 THERMAL PROPERTIES ............................................................................... 12
   2.5 SOUND INSULATION ..................................................................................... 13
   2.6 FIRE AND VERMIN RESISTANCE ................................................................... 13
   2.7 DURABILITY AND MOISTURE RESISTANCE ............................................. 13
   2.8 TOXICITY AND BREATHABILITY ................................................................. 13
   2.9 SUSTAINABILITY (ENVIRONMENTAL IMPACTS) ......................................... 13
   2.10 BUILDABILITY, AVAILABILITY AND COST .............................................. 14
   2.11 PHYSICAL AND MECHANICAL PROPERTIES ......................................... 14
   2.12 COMPARISON BETWEEN ACP, SOLID ALUMINIUM AND STEEL .......... 15
   2.13 ADVANTAGES IN RELATION TO OTHER MATERIALS ............................... 15

3.0 PRODUCT FEATURES, TYPES AND APPLICATIONS ....................................... 17
   3.1 FEATURES OF ACP ....................................................................................... 17
   3.2 MAIN FEATURES OF ALUMINIUM COMPOSITE PANELS ............................ 17
   3.3 GENERAL TYPES OF ACP ............................................................................ 20
   3.4 SPECIFIC ADVANTAGES OF HIGH QUALITY ACP ....................................... 27
   3.5 MAJOR APPLICATIONS OF ACP ................................................................. 27

4.0 MARKET PROSPECTS FOR ALUMINIUM COMPOSITE PANELS ................ 33

5.0 MANUFACTURING ASPECTS OF PROPOSED PROJECT ............................... 41
   5.1 PROJECT FEATURES ..................................................................................... 41
   5.2 PRODUCT DESCRIPTION .............................................................................. 41
   5.3 ANALYSIS OF PRODUCTION PROCESS .................................................... 43
   5.4 PLANT AND MACHINERY ........................................................................... 45
   5.5 RAW MATERIALS, CONSUMABLES AND BOUGHT OUT ITEMS .................. 46
   5.6 UTILITIES .................................................................................................... 47
   5.7 DESIRED PROJECT LOCATION & INFRASTRUCTURE .............................. 47
   5.8 MANPOWER ................................................................................................ 48
   5.9 PRODUCT QUALITY CONTROL .................................................................... 49
   5.10 POLLUTION CLEARANCES ........................................................................ 50
   5.11 PROJECT IMPLEMENTATION ...................................................................... 50

6.0 FINANCIAL ANALYSIS OF THE PROJECT .................................................. 51
   6.1 THE PROJECT COST .................................................................................. 51
   6.2 MEANS OF FINANCE .................................................................................. 54
   6.3. COST OF OPERATIONS AND PROFITABILITY ........................................ 55
7.0 CONCLUSION .................................................................................................................. 60

8.0 PROJECTED FINANCIAL PERFORMANCE .................................................................. 61
   8.1 PROJECT COST .............................................................................................................. 62
   8.2 MEANS OF FINANCE .................................................................................................. 63
   8.3 LAND & SITE DEVELOPMENT COST ......................................................................... 64
   8.4 COST OF BUILDINGS & CIVIL WORKS ...................................................................... 65
   8.5 COST OF MACHINERY AND EQUIPMENT .................................................................. 66
   8.6 COST OF ELECTRICAL INSTALLATIONS .................................................................... 67
   8.7 BREAK UP OF PRE-OPERATIVE EXPENSES .............................................................. 68
   8.8 PROPOSED PRODUCTION AND SALES PATTERN .................................................... 69
   8.9 COST OF PRODUCTION AND PROFITABILITY STATEMENT ..................................... 70
   8.10 ESTIMATION OF WORKING CAPITAL REQUIREMENT .............................................. 72
   8.11 PROJECTED FUND FLOW STATEMENT .................................................................... 75
   8.12 CALCULATION OF DEBT SERVICE COVERAGE RATIO (DSCR) ............................ 76
   8.13 PROJECTED BALANCE SHEET .................................................................................. 77
   8.14 CALCULATION OF BREAK EVEN POINT ................................................................... 78
   8.15 PROFITABILITY RATIOS ........................................................................................... 80
   8.16 INTERNAL RATE OF RETURN ON TOTAL PROJECT ............................................... 81
   8.17 INTERNAL RATE OF RETURN ON PROMOTERS’ EQUITY ........................................ 82
   8.18 RAW MATERIALS REQUIREMENT AND COST ......................................................... 83
   8.19 MAN POWER REQUIREMENT AND COST ............................................................... 84
   8.20 POWER AND FUEL REQUIREMENT AND COST ..................................................... 86
   8.21 LOAN REPAYMENT AND INTEREST ......................................................................... 87
   8.22 DEPRECIATION SCHEDULE ..................................................................................... 88
   8.23 CALCULATION OF INCOME-TAX ............................................................................ 90

9.0 ABOUT ITCOT .............................................................................................................. 91
   9.1 ABOUT ITCOT ............................................................................................................ 91
   9.2 PROMOTERS OF ITCOT ............................................................................................ 91
   9.3 BOUQUET OF SERVICES ........................................................................................... 92
   9.4 APPROVALS / EMPANELMENT ................................................................................ 93
   9.5 ITCOT PUBLICATIONS ON CURRENT INTEREST ................................................... 93

10.0 SAMPLE LIST OF SUPPLIERS / MANUFACTURERS ................................................ 95
   10.1 SAMPLE LIST OF ACP PRODUCTION LINE SUPPLIERS ........................................ 96
   10.2 SAMPLE LIST OF MAJOR MANUFACTURERS/SUPPLIERS OF ALUMINIUM FOIL 98
   10.3 SAMPLE LIST OF SUPPLIERS OF PLASTIC GRANULES ...................................... 101
   10.4 SAMPLE LIST OF ADHESIVE FILM SUPPLIERS .................................................. 102
   10.5 SAMPLE LIST OF LEADING ACP MANUFACTURERS ............................................ 103
   10.6 SAMPLE LIST OF ACP DEALERS / DISTRIBUTORS / FABRICATORS .................... 105
Order Form for

REPORT ON ALUMINIUM COMPOSITE PANELS (ACP) PROJECT

Mr / Mrs : 

Designation : 

Name of the Company : 

Address

City : 
Pin code : 
Telephone : 
Fax : 

We hereby place an order for the Report on Aluminium Composite Panels Project (ACP), towards which we enclose a demand draft drawn in favour of ITCOT Consultancy and Services Ltd., Payable at Chennai for Rs.16,000 /- (Rupees Sixteen Thousand only). The report may be sent to the above address.

Date: Signature

Name of signatory

Payment Particulars

Amount : Rs.16,000 /-
Demand Draft No. : 
Dated : 
Drawn on : 

Please send this order form duly filled in along with the DD to:

ITCOT Consultancy and Services Limited
50A, Greams Road, Chennai 600006
Phone: 044-42936800/2829 0324
Fax: 044 – 2829 3512
Email: itcot@vsnl.com
Website: www.itcot.com