

Communication from the Commission of the European Communities to companies in the ECSC

(92/C 117/02)

(Article 48 of the ECSC Treaty)

In a letter to the chairman of the Consultative Committee of the ECSC, the Commission asked the committee to undertake the consultation laid down in Article 55 (2) (c) of the ECSC Treaty concerning the desirability of allocating the following aid aimed at facilitating technical research.

Pursuant to Article 48 of the Treaty, associations of companies in the ECSC are entitled to submit to the Commission, before the final decision to support these projects is taken, any observations made by the members concerning undermentioned subjects of consultation.

Any observation should be received by the Commission before 30 May 1992.

RESEARCH PROJECTS

	<i>Aid in ECU</i>
1. Improvement of coke quality and controlling of coke characteristics at high injection rates of pulverized coal	627 000
2. Production of reducing gases from fatal by-product gases	495 300
3. Effect of unburnt coal residues on blast furnace bosh operation	189 300
4. Reduction of iron ore with hydrogen or reducing gas rich in hydrogen under environmental aspects	503 700
5. Iron ore reduction in a fluidized bed with hydrogen containing gases	367 634
6. Investigation of sticking mechanisms during reduction of iron ore/coal mixtures in a fluidized bed reactor	240 900
7. Development of new systems and materials for high temperature filtration of recovery gases	626 100
8. Development of a mathematical model of parameters controlling injectant behaviour	227 148
9. Continuous temperature measurement of the melt in the converter	276 000
10. Use of plasma coating on refractory materials for slide gate valves	298 500
11. Utilization of fine-grained steel slags for mineral sealing products — laboratory and practical investigation	211 800
12. Minimization of iron losses to the BOS plant waste gas cleaning system	263 978
13. New methods for recycling of organic/metallic coated steel scrap	148 305
14. CFD model for gas and fluid flow in the steel converter	217 412

	<i>Aid in ECU</i>
15. Evaluation of MgO content in vacuum ladle furnace slags to control H ₂ , O ₂ and S levels and refractory wear	315 900
16. Study of the thermomechanical stresses developed in refractory products and brickwork for the optimization of steel ladle linings	495 900
17. Optical sensing of temperature and stirring conditions in ladle furnaces	258 029
18. Improvements to vacuum degasser operation	152 657
19. Continuous casting of steel wires	414 000
20. Mathematical model of a full-size plant for direct casting of 200-1 000 mm-wide thin strip using twin roll casting with lateral steel supply	371 700
21. Determination of strand surface temperature in continuous casting	414 310
22. Induction heating of refractory materials in continuous casting of steel	286 800
23. Electromagnetic side containment in continuous casting of strip using the belt-roll process	237 900
24. Development of new steel level control strategies in the continuous cast slab mould using a multi-sensor system	350 100
25. Mechanical soft reduction of continuous cast long products during solidification	416 400
26. Analysis of solidification process in continuous strip casting through thermo-fluid dynamics modelling	273 900
27. Electromagnetic containment of liquid steel in mould of twin roll continuous strip caster	586 800
28. New method of descaling	369 000
29. Improved accuracy of beam sections	305 400
30. Adhesion test at high temperatures on scales formed on low-carbon steel	203 100
31. Improving the thermal quality of slabs	586 800
32. Hot co-rolling for plating long products	469 500
33. Looperless rolling in hot strip finishing mills	540 900
34. High strength hot- and cold-rolled strips with superior formability obtained by transformation-induced plasticity	396 300
35. High productivity rolling of thin products in a hot strip mill	255 600
36. Transfer and wear of roughness in final stand of cold rolling mill	408 900
37. Development of a high frequency active vibration damping system for cold reduction mills	196 253

	<i>Aid in ECU</i>
38. Upgrading of iron-containing steel mill solid wastes from continuous pickling line for use in ceramics, glazes, glasses and pigments	448 828
39. Impact of strip shape on strip tracking	430 733
40. Improving microstructure and mechanical properties during direct rolling of thin slabs using modified thermomechanical treatments	289 500
41. Computer-assisted modelling of hot deformation of steels	536 700
42. Development of a model for hot strip rolling of duplex and non-oriented magnetic steels	563 400
43. FE modelling of deformation and microstructure in multipass rolling	333 658
44. Ultrasonic prototype unit for testing hot, continuously cast slabs	455 700
45. On-line measuring techniques for determining the optical characteristics of stainless cold-rolled strip	249 900
46. Inspection of working rolls in a hot strip mill	348 900
47. On-line diagnostics of components of a sinter plant	469 500
48. Quality control of continuously cast long products	407 100
49. Development of a laser-based, ultrasonic measuring and test device for use in plant	466 500
50. Residual stress mapping of austenitic stainless steels	134 400
51. Improved quantitative microanalysis of steels by EDX-SEM	124 200
52. Application of PDA spectrometry for the analysis of steel products	360 900
53. Surface analysis of non-conducting coatings by radiofrequency glow discharge lamp spectrometry	349 200
54. Evaluation of glow discharge mass spectrometry (GDMS) for steel analysis	227 210
55. Improvement of the in-plant measurement systems of oxide inclusions for the production of clean steel	266 240
56. Local application of very low yield strength consumables	498 000
57. Toughness of welded joints	281 700
58. Brittle fracture-toughness assessment of HSLA steel welded joints	408 900
59. Mathematical modelling of cold extrusion and forging of steel long products	415 995
60. Mechanisms of crack initiation in the HAZ	195 600
61. Crack propagation mechanisms in corrosion fatigue	215 400
62. The influences of stable particles on weld HAZ structures and properties	125 175

	<i>Aid in ECU</i>
63. Investigation of the corrosion of zinc- and polymer-coated steel	200 700
64. Adherence and ageing mechanisms of polymer-coatings	191 700
65. Stress corrosion cracking in low-alloy steels	84 600
66. High performance organic treatment for coated steel sheet	499 800
67. Effect of stannous tin adsorption on the electro-chemical behaviour of iron in anaerobic slightly acidic media — application to the corrosion of tin plate	284 100
68. Development and verification of a new mathematical model of hydrogen solubility and permeation in structural steels	229 324
69. Mechanisms of sulphide stress cracking corrosion in wet, sour gas media. Application to pipeline steels of very high grades	485 700
70. Real surface condition of stainless steels and corrosion resistance behaviour	567 600
71. Improving the corrosion resistance of stainless steels by modification of passive films	364 953
72. Stainless steel coloration study: optimization of two dry surface treatment processes	517 970
73. Stress corrosion cracking of weldable microalloyed steels	475 119
74. Coloured stainless steel for coil coating	352 200
75. Factors controlling resistance to SSCC in welded linepipe	151 930
76. Effect of cathodic protection on corrosion fatigue properties of welds	163 963
77. Corrosion data for life-cycle costing in applications of stainless steels	366 426
78. Ultrasonic techniques for reducing the environmental impact of pickling	205 985
79. Improved steels for high-speed machining	346 500
80. Hardened steel with 1 000 MPa strength for cold forming	240 300
81. Study of recrystallization texture in silicon-iron	637 200
82. Simulation of transformation cycles of steel	274 500
83. Influence of P, Al, B elements on the behaviour of hot-working X 38 CrMoV 5 1 (1.2343) steel	197 400
84. Investigation to optimize the parameters of CO ₂ laser cutting of stainless steel substrates as a base for the creation of standards	522 608
85. Development of material science/technological solutions for producing grain-orientated, semi-processed magnetic strip	551 700
86. Stainless steels and alloys for use in flue gas scrubbers	364 200

	<i>Aid in ECU</i>
87. Study of diffusion of silicon vapour phase deposited on magnetic steel sheet	371 700
88. Coatings for colouring and better corrosion properties for stainless steels	248 914
89. Fatigue strength of spot welded stainless steel components for railway carriages under operational loading conditions	470 700
90. Improvement of the mechanical behaviour of body components by specific choices of the steel sheet grade and manufacturing parameters	463 200
91. Improvement of the formability of coated sheets by non-permanent coating treatments	481 800
92. Improvement of the properties of use of galvalume coated sheets	626 100
93. Corrosion resistance properties of aluminized strip for catalytic exhaust systems	626 100
94. Thickness control of hot dip coating of steel	254 400
95. Production and properties of novel alloy electrolytic coatings on steels	465 575
96. Modelling and verification of forming of coated thin steel sheet products	276 338
97. On-line monitor of curing state of organic coatings on steel strip	139 116
98. Rapid assembly techniques for precoated steels	145 200
99. Strength/ductility relationships in ultra high strength sheet steels	106 872
100. Laser welding of sub-assemblies before forming	318 300
101. Laser welding with filler metal	382 500
102. Evaluation of the fatigue behaviour of TMCP structural steels for off-shore applications	352 200
103. Fracture behaviour of girth welds in high strength high YS/TS ratio line pipe steels	299 700
104. Effect of residual stress and welded attachment thickness on fatigue of welded joints	154 738
105. The competitive threat to fixed steel platforms — phase 2	262 260
106. The influence of low carbon equivalents and low sulphur levels on the allowable welding and bending procedures	240 300
107. Plastic design requirements for high-strength steel frame works	347 400
108. Buckling curves of hot rolled H steel sections submitted to fire	44 100
109. Buckling curves of hot rolled H steel sections submitted to fire	203 100

	<i>Aid in ECU</i>
110. Double skin composite construction for submerged tube tunnels (Phase 2) (P2650 continued)	93 300
111. Plastic design for high strength steel frameworks	398 100
112. Wide-span support-free flooring	388 200
113. Analysis of the stiffening effect of building panels in seismic and aeolian conditions	391 200
114. Buckling curves in case of fire, M-N interaction (Part III) (see P2955 & P2956)	84 600
115. Joint market development study for structural steels in Europe	200 000

PILOT/DEMONSTRATION PROJECTS

1. Reduction of fine ore and steel plant dusts in a circulating fluidized bed (Part 1)	3 355 250
2. Direct steel making — Feasibility study	1 000 000
3. Valorisation of steel works wastes containing Zn, Pb and iron oxides using hydrometallurgy	1 442 400
4. The cyclone converter furnace (Part 1)	3 586 500
5. Industrial feasibility demonstration of a highly automated refractory bricklaying system for steel vessels	1 821 719
6. Electromagnetic nozzle for production of high alloy steel wire difficult to obtain by cold forming	452 000
7. Development of a fully closed continuous casting machine for the high-speed casting of prime quality steels	1 251 750
8. Pilot plant for thin sheet coating	3 072 800
9. Production of foils by electroforming (PP146 — complement)	237 000
10. Development of an automatic and intelligent system for on-line inspection and control of crane metallic cables by remote control in the steel industry	544 184

1991 PROJECTS CARRIED OVER

1. Advanced modelization for blast furnace control	651 300
2. On-line detection system for small inhomogeneities in cold-rolled steel strip (Phase I)	126 300
3. Novel surface treatments of strip for the formation of protective coatings (Part 2)	174 800

RESERVE LIST

	<i>Aid in ECU</i>
1. Direct recycling of zinc-contaminated BOF Filter dusts and sludges	372 300
2. Expert system for improved operation of steelworks pollution control plant	122 941
3. Metal recovery by treatment of rinse water from electrolytic strip galvanizing	448 200
4. Investigation of skinpass rolling of metallic-coated steel strip	275 100
5. Real time radiography of steel sheet for non-metallic inclusions (Phase 2)	229 318
6. High temperature and acid corrosion of stainless steel	500 400
7. Organic coatings for corrosion protection of coated sheet	310 200
8. Simplified version of Eurocode 4 for current composite building design	192 000
9. Reduction of fine ore and steel plant dusts in a circulating fluidized bed (Part 2)	2 281 000
10. The cyclone converter furnace (Part 2)	1 120 250
11. Demonstration of the application of strand vibration on a commercial billet casting plant to improve continuously cast product structures (Phase 1)	280 408
