# COMMISSION OF THE EUROPEAN COMMUNITIES

COM(77) 374 final

Brussels, 27 July 1977

Draft Council Decision
on approval of the accession of the EAEC
to the Agreement on Materials for Gas Turbines
(COST Projects 50/51/52)

(submitted to the Council by the Commission)

COM(77) 374 final

## Memorandum from the Commission to the Council

- On 23 November 1971, nine European States (Federal Republic of Germany, France, Italy, Luxemburg, Netherlands, United Kingdom, Austria, Switzerland and Sweden) and the European Coal and Steel Community signed the Agreement "Materials for Gas Turbines" for the implementation of a concerted project (COST Project 50/51/52). This Agreement, which at first was to last three years, made provision for an annual contribution by the ECSC of 120.000 u.a. to be used for research work to be carried out by the Joint Research Centre.

- On 26 July 1973, the Commission informed the Secretariat General of the Council that the ECSC on grounds of a negative opinion of the ECSC Advisory Committee was not able to ratify the Agreement. In a proposal addressed to the Council the same day, the Commission then endorsed that the European Atomic Energy Community should accede to the agreement on "Materials for Gas Turbines". The Commission submitted this plan to the Council, pursuant to Article 101 of the EAEC Treaty.

  It then became apparent that the JRC Ispra in view of the guidelines for a multiannual research programme decided upon by the Council on 14 May 1973 (OJ L 153/73) could only perform a relatively limited technical contribution to the Cost Project 50/51/52. Therefore the Commission did not maintain its proposal of 26 July but withdrew it on 14 February 1975.

- This situation has changed since 25 August 1975, when the Council adopted a EAEC research programme in the field of High Temperature Materials to be carried out at the Petten establishment. In the JRC 1977-1980 multiannual research programme decided upon by the Council on 29 March 1977 (COM (76) 171) research work in the field of "High Temperature Materials" will be continued.

- The Commission considers that the JRC through its programme "High Temperature Materials" can make a worthwhile contribution to the execution of the COST 50/51/52 project. Within the framework of this COST project an important section concerns the "High Temperature Materials for Gas Turbines". So the research work on "High Temperature Materials" which is included in the new multiannual programme of the JRC coincide for a large part with the concerted COST Action 50/51/52. The procedure to extend the COST (50/51/52) Agreement from 1.July 1977 for another period of three years bas been launched.

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- Participation by the Joint Research Centre to the COST action would provide the Centre with positive benefits. Participation by the JRC :

  - would contribute to the acquisition of new knowledge

  - could generate new ideas for the future orientation of research work

  - would provide additional opportunities for contacts outside the establishment, in particular with non-Community European countries.

Participation by the European Atomic Energy Community would not result in additional financial support for the budget of the Community.

In conclusion, the Commission proposes that the Council approves accession of the EAEC to the COST project 50/51/52 in pursuance of Article 101 of the EAEC Treaty and agrees on the enclosed draft decision.

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# Draft Council Decision
# approving the accession of the European Atomic Energy Community to the Agreement on Materials for Gas Turbines (COST Projects 50/51/52)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 101 thereof,

Having regard to the proposal from the Commission,

Whereas nine European states and the Commission, on behalf of the European Coal and Steel Community, signed an Agreement in Brussels on 23 November 1971 relating to the participation of the signatories thereto in COST Projects 50/51/52;

Whereas the Council, by a Decision of 29 March 1977, adopted a research and training programme for the European Atomic Energy Community in the field of materials for high-temperatures for 1977-80;

Whereas this programme includes research activities that come under the work covered by the said Agreement;

Whereas the Community's participation in this Agreement is likely to assist the optimum implementation of the Community research programme;

Whereas, therefore, the accession of the European Atomic Energy Community to the said Agreement should be approved;

Whereas the European Coal and Steel Community is not in a position to carry out the formalities required under its own rules of procedure for the implementation of the Agreement,

HAS DECIDED:

## Sole Article

The accession of the European Atomic Energy Community to the Agreement on Material for Gas Turbines (COST Projects 50/51/52) is hereby approved.

TECHNICAL ANNEX

to the document sent by the Commission to the Council with a view to participation of the Joint Research Centre in COST Projects 50/51/52

The Petten establishment of the Joint Research Centre shall be responsible for carrying out a research programme on high-temperature materials which will include projects concerned, on the one hand, with the study of properties of materials for high-temperature applications and, on the other, with the comparison and dissemination of scientific and technical information on these materials. By virtue of their direct link with the activities carried out as part of the COST project on materials for gas turbines, some of these activities could form the Commission's contribution to this project.

Specifically, the Commission's contribution would cover three themes:

1. Effect of protective coatings on the mechanical properties of certain nickel-based alloys.

The experimental work would embrace the study of the following aspects:

(i) effect of the heat treatment involved in the coating process;

(ii) stability of coatings in the absence and in the presence of mechanical stresses and of various atmospheres;

(iii) behaviour of coated and uncoated alloys in the conditions of service for which the machinery is designed;

(iv) study of industrial components after use; interpretation of failures.

2. Study of the statistics of creep behaviour in alloys and their effect on the prediction of alloy life.

The aim of this project is to define and measure the effect on these statistics of the main variables associated with the material and with the measurement technique.

3. Feasability study for a data bank on materials for gas turbines.