

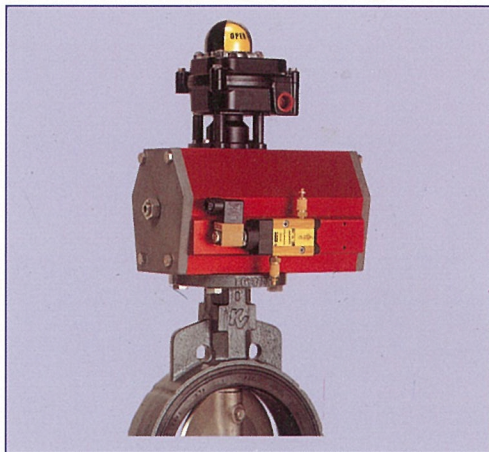
# PNEUMATIC ACTUATOR

## 국산화 개발

(최종보고서)

The Development of Actuator  
for B/F, Ball Valve & Damper

2000. 10.



한국전력공사  
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# SUMMARY

1. Title : The Development of Pneumatic Actuator  
for B/F, Ball Valve & Damper
2. Developed by : Korea Electric Power Research Institute &  
Dong WOO Valve Control Co., Ltd.
3. Period of Development : Feb. 24, 1999 - Aug. 23, 2000 (18 Months)
4. Total Cost For Development :
  - KEPCO'S Expense : (Won)240,771,000.- (68.9%)
  - Dong Woo's Expense : (Won)108,863,000.- (31.1%)
5. Purpose and Necessity of Research and Development :
  - a) Purpose of Research and Development  
The development and localization of pneumatic actuator to the application for power plant.
  - b) Necessity of Research and Development  
The thrust force transmission to air control damper and other application for power plant have been used primitively made cylinder with linkages instead of improved pneumatic actuator. But this kind of mechanism have required special made products in accordance with required torque and dimension of the equipment, because there are standardization. And there are On-Off type and Modulating type according to required function, which means hard to maintain and provide for spare parts efficiently.

Above mentioned problem could be solved by using the same structure with standardized pneumatic actuator and producing several models of pneumatic actuators. In addition to that, applying ISO5210 mounting flange for the valve and dampers, we can mount these actuators to damper directly with easy and simple installation. It could be given us some merits i.e they don't need large space for the installation, easy handling and no calibration at the site.

## 6. Objective of Research and Development

The development of scotch-toke type pneumatic actuator, instead of normal type of pneumatic actuator for different application to the Damper of power plant, should be occurred many advantages.

For example, stabilization of production, saving cost, substitute for import and export to the overseas market.

## 7. Contents of the Development

### a) Primary Period ( Feb. 24, 1999 - Dec. 31,1999 )

- Collection for technical data and information of domestic and overseas products.
  - Review of technical specification of pneumatic actuator.
  - Review and collect technical data of technically advanced countries.
- Meeting with KEPCO for the procedure of site test.
  - Model selection and test plan fixing.
- Comparison of it's related raw material.
- Development of assembling technology and Jig manufacturing.
  - Technical review about body and Scotch - Yoke assembling with KEPCO.

Design and manufacturing of actuator body and other parts for torque transmission.

- Model selection and detailed review for it.

○ Sample testing.

b) Second period ( Jan. 1, 2000 - Aug. 23. 2000 )

Mounting of Sample

Sample testing and evaluation.

Result review and reinforcement

## 8. Effect of Research and Development

a) Technical point of view

Up to now, all this kind of pneumatic actuators have been imported which means there is no technical foundation so far however we can take a step in this field in technical point of view by localization of this pneumatic actuator.

b) Economic point of view

Replacement with this pneumatic actuator is possible for the application of power plant and to the other industries, and to be expected exporting to overseas market.

c) Consequence

Most important matters are to be possible with localization of pneumatic actuator ourselves and to have experience from various application activities in technically.

## 9. Usage of Research and development

### a) Objective of applicable customer

KEPCO thermal power plant Div.

### b) How to use

- Replacement of existing old actuators.
- Application to the new power plants which will be constructed in the future.
- Supply to other industries
- Overseas marketing