

# Foreign power stations place big orders with Swiss industry

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## UNO PLACES AN ORDER WITH SWITZERLAND

Within the framework of its technical aid programme, the United Nations Special Fund asked the Swiss firm of consultant engineers Motor-Columbus of Baden, to carry out a survey into the electrification possibilities in Panama. On the basis of the results of this survey the Swiss firm, which was awarded the contract in the face of very keen international competition, is to submit to the governments of Panama and the United States a complete technical and economic report on the opportuneness and the economic possibilities of harnessing the energy of the rivers Chico and Chiriqui, with a view to stepping up the industrialization of the western part of Panama. This survey will also investigate the possibilities of at the same time using the two rivers for the irrigation of the lower regions for the purpose of increasing the agricultural potential.

A group of Swiss experts will be sent to Panama for this purpose for a considerable period of time. The group will include hydrological experts, geologists, specialists in dam construction, economists and irrigation experts.

[O.S.E.C.]

## FOREIGN POWER STATIONS PLACE BIG ORDERS WITH SWISS INDUSTRY

The Charmilles Engineering Works Ltd., at Geneva, recently received two orders for the following plant, both of them remarkable for their size, power and certain technical features:

**Gerstheim** (north-east France). This is the last but one big power station to be set up on the Rhine, where it flows through France, between Basle and Strasbourg. It is fitted with six "bulb" groups, and is the first Rhine power station to be equipped not with conventional machinery but so-called "bulb" groups, the distinguishing feature of which is that the water follows a mainly axial path through the machines, the alternator driven by the turbine wheel (Kaplan-type in this instance) being enclosed in a waterproof compartment surrounded by water, hence the name "bulb". Each group develops approximately 34,000 h.p. for a maximum drop of 43 feet. The group of builders of which the Geneva firm forms part, received an order for four of these units. From the point of view of power and size, these "bulb" type machines are among the biggest of the kind in western Europe.

**Mont-Cenis** (in the French Alps). This plant comprises two Pelton turbines with six vertical-axle injectors which are the most powerful in the world. They are in fact designed to develop a power of 276,000 h.p. each under a net drop of 2,851 feet.

Thanks to the generalized use of rectilinear injectors designed by the Charmilles Engineering Works, the power station, in co-operation with the builders, has been able to create conditions that result in a very great saving in both collectors and civil engineering work.

It is possible to measure the progress accomplished in a very short time when it is realized that the Roselend power station, which was built as recently as 1960, is fitted with six Pelton turbines with two injectors each developing 113,500 h.p. under a head of 4,025 feet.

It is worth pointing out that the Geneva firm has made all the above-mentioned turbines for France within the framework of the Alsthom-Charmilles group; the actual manufacture is carried out partly in France, in the Alsthom Works at Belfort, and partly in Switzerland at Geneva, all

on the basis of the plans drawn up from start to finish in the offices and laboratories of the Swiss firm.

[O.S.E.C.]

## A NEW SWISS SYSTEM FOR IMPROVING THE REPRODUCTION OF PHOTOGRAPHS

If one holds a colour transparency towards the light and compares it with a print taken from the same negative, one is always surprised to see how much richer and more vivid the colour of the transparency seems. The loss of brilliance and colour in photographs viewed directly is accounted for among other things by the fact that part of the light reflected from the back layer does not reach the observer's retina but is deflected at the surface separating the gelatine from the air.

A big Swiss chemical and pharmaceutical products firm has tried to overcome these drawbacks in the reproduction of photographs by concentrating its research in two directions. The "Telcolux" process perfected in its laboratories replaces the baryta layer on the back — with its diffused reflection — by a sheet of aluminium foil. The latter, which is cold rolled and reflective, has the property of reflecting the light only in a given cone. In this way it is possible to prevent total reflection in the image layer and at the same time to increase the brilliance of the light areas by concentrating the light into a narrow pencil.

The photographs obtained with the "Telcolux" process also have a "micro-relief" surface, which considerably reduces the stray light reflected from the surface, resulting in its turn in deeper shadows and stronger contrasts.

The principle of the "Telcolux" process can be applied not only to photographic papers, but also to printing processes of all kinds. The positive prints made by means of this process, whether in colour or black and white, have practically the same sparkle and the same vividness of colour as the projected slides.

[O.S.E.C.]

## AIR-CONDITIONING FOR SPINNING FRAMES

Spinning requires very carefully controlled conditions of heat and humidity, and the more the output of spinning frames is stepped up, the more air is required for the air-conditioning of the premises containing them.

With a view to avoiding wastage and enabling the operatives to work in a normal atmosphere, a big Swiss firm recently produced an individual system of air-conditioning which combines the suction of the roves and the necessary humidification, and above all air-conditions the space inside the frames, and consequently the feed thread. The air circulates in a closed circuit. Thanks to this new solution, the humidification effect is the maximum where most needed, i.e. inside the frames.

Among the advantages of this system, it is interesting to note that the relative humidity in the premises may be 5 to 10% lower than in the frames. In addition, the installation costs are small compared with the returns, maintenance is simplified, the apparatus takes up little room, its installation requires no engineering work, and there is no system of pipes outside the frames. Finally, thanks to the evaporation system of cooling, the air in the neighbourhood of the frames is cooler than in the premises as a whole.

[O.S.E.C.]