

Contribution to 'Vanadium in South Africa'*

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There can be very few members of the Institute who failed to appreciate this extremely interesting and informative paper by Mr Rohrmann of Highveld Steel and Vanadium Corporation. This story of vanadium in South Africa has a very wide appeal to members of our profession: it embraces both ferrous and non-ferrous metallurgy, and both hydrometallurgy and pyrometallurgy. In a comparatively short time, South Africa has become one of the world's leading producers of vanadium.

It might be of interest to some Institute members to hear that, during World War II, the vanadium requirements of the British Commonwealth were supplied almost entirely from Rhodesia Broken Hill Development Company Ltd, Broken Hill, Northern Rhodesia. Small quantities of the vanadium minerals descloizite and vanadinite occur with the lead-zinc ores at this property. A vanadium concentrate was produced for the leach plant by gravity and flotation techniques, and was supplemented by some leach-grade material from underground and from various zinc dumps on the surface. Treatment with sulphuric acid dissolved the vanadium and other constituents of this concentrate, and

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neutralization with limestone precipitated the silica, lead sulphate, and ferric compounds, leaving the vanadium in solution. The addition of sulphuric acid, with heat, to the vanadium solution gradually precipitated vanadic hydrate. The latter was filtered, washed, melted in a furnace, broken into lumps, and despatched as fused vanadic oxide, V_2O_5 .

The output of V_2O_5 from Broken Hill during the war years was considerable, about 70 tons per month. After the war, vanadium production at Broken Hill was discontinued: other producers with richer deposits closer to industrial centres could produce the metal at far lower cost.

The writer would like to pay tribute to the men at Broken Hill, Northern Rhodesia, Black and White, who laboured cheerfully under difficult conditions to meet the wartime demands for that versatile and strategic metal vanadium.

It is of interest to note that the successful efforts of Rhodesia Broken Hill Development Company Ltd in Northern Rhodesia to provide vanadium for the British Commonwealth during the war, and the work of Highveld Steel and Vanadium Corporation Ltd in placing South Africa in the forefront of world vanadium producers, were both greatly assisted by the financial and technical resources of the Anglo American Corporation of South Africa.

EEC Foreign Ministers' visit to South Africa*

After the recent visit of the EEC Foreign Ministers, the following statement was directed to Mr Jacques Poos of Luxembourg by the President of FSPE, Mr D.H. Mills.

'On behalf of all Professional Engineers in South Africa, we welcome your visit to obtain first-hand knowledge of the current situation. Our membership includes members of all race groups, and we practise no form of discrimination. We believe it essential that the human resources of our country be used to their maximum potential without restraints based on colour, creed, or sex, and that all our peoples should benefit from their efforts on an equal basis. Thus, we are, for example, co-sponsors of PROTEC, a project to give disadvantaged Blacks an opportunity to follow a technological career.

'For these reasons we strongly support the moves that are being taken to bring about a just and free society in South Africa, by the government and well-wishers of the country. We are, however, concerned that some of the pressures currently being exerted could have a negative rather than positive effect. As engineers, we are intimately involved in all aspects of the economy, from new develop-

ment right through to manufacturing and maintenance, and we are only too well aware of the extent of unemployment and misery that has occurred through the curtailment of new developments and the reduction of manufacturing staff in the present recession. The greatest impact is, unfortunately, felt by the less qualified, largely Black, sector of the population and has in our view considerably aggravated the current unrest. (It is no coincidence that the last major unrest was in 1976, when there was also a major downturn in the economy.)

'For the above reason, we would strongly advise against any actions (such as disinvestment) that will weaken the economy further. In fact, we believe that a strong economy will expedite reform, and this will reduce resistance from those concerned about losing a privileged position, and ensure that ever-increasing numbers of our Black citizens attain more responsible positions in the economy and inevitably the political strength that goes with it. The issue in South Africa today is not whether reform will occur that is acceptable to all our people, but rather the rate and orderliness of such reform. A strong economy will lead to a more rapid change in a much more peaceful manner. We would be happy to provide information on specific issues should you so wish.'

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