Centre for Science and Technology of the Non-Aligned and Other Developing Countries (NAM S&T Centre)
and
Department of Science & Technology (DST),
Republic of South Africa in collaboration with MINTEK

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NAM S&T Centre – DST (South Africa) Training Fellowship on Minerals Processing & Beneficiation (2019)

Announcement

The Centre for Science and Technology of the Non-Aligned and Other Developing Countries (NAM S&T Centre; www.namstct.org) is pleased to invite applications from suitable candidates for the **Joint NAM S&T Centre – DST (South Africa) Training Fellowship** on '**Minerals Processing & Beneficiation'**for the year 2019.

This Fellowship scheme was initiated in the year 2015 with an aim to providing opportunity to the scientists and technologists from the Member Countries of the NAM S&T Centre for affiliation with *MINTEK, South Africa* (www.mintek.co.za) for a period of three months to address the skills gap in the minerals beneficiation value chain and to get exposed to minerals processing technologies as well as undergo in-service training attached to the existing MINTEK programmes. This training programme will provide direct and indirect benefits to the Fellows from the Member Countries of the NAM S&T Centre and the host country, South Africa, through creation of networks and exposure to new developments in mineral processing and beneficiation.

Under this scheme, **Twenty (20) Fellowships** are available for the year 2019 each for a maximum duration of *three months* (12 August to 1 November 2019).The sending country, or the candidates themselves, will have to arrange for their international travel to and from South Africa. The Department of Science and Technology (DST) of South Africa will provide free Accommodation and a subsistence allowance @ of ZAR3500 (South African Rands) per month for the duration of the Fellowship.

Applications recommended by the parent institutions of the interested scientists, technologists and engineers may be submitted in the relevant format by email directly to **Mr. Selby Modiba at (Selby.Modiba@dst.gov.za), Ms. Palesa Motsoeneng at (Palesa.Motsoeneng@dst.gov.za) and Ms. Karabo Mphogo (Karabo.Mphogo@dst.gov.za) of the DST (South Africa).**

In matter of selection, the decision of DST (South Africa) will be final which will also send the Fellowship Award Letters to the selected applicants. All applicants are required to seek administrative clearance from their respective parent organisations. Copies of the guidelines for the Fellowship and the application form are **attached** (also available at the Centre's Website www.namstct.org).The Guidelines may please be read carefully before submitting the application. **Attached** also please find a document which gives the details of programme format and topics to be covered, project work, and various other general information which may also be seen by the prospective applicants.

The last date for submitting application for the Fellowship is 15 May 2019.

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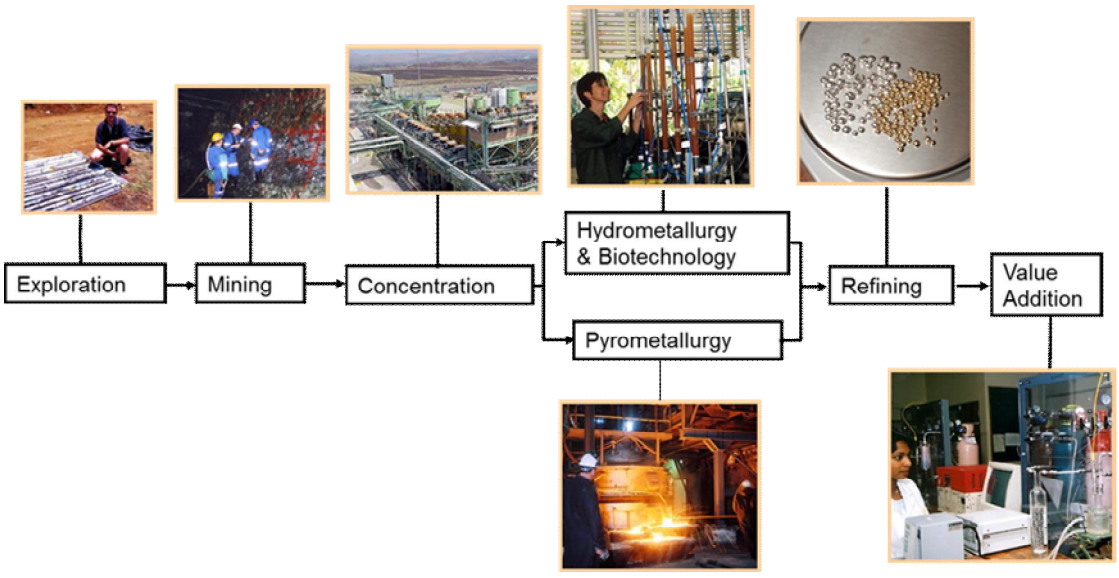
GUIDELINES AND APPLICATION FORM

I. Background

Mineral resource beneficiation is an important value-creating activity in the developing countries, and mining and consumption of minerals is indispensable to improve the quality of life of the people.

Most of the 47 member countries of the NAM S&T Centre - Afghanistan, Algeria, Argentina, Bangladesh, Bhutan, Bolivia, Burkina Faso, Cambodia, Colombia, Congo, Cuba, Cyprus, Egypt, Ethiopia, Gabon, Gambia, Guyana, India, Indonesia, Iran, Iraq, Jordan, Kenya, Korea (DPR), Lebanon, Malaysia, Malawi, Malta, Mauritius, Myanmar, Nepal, Nicaragua, Nigeria, Palestine, Pakistan, Serbia, Sri Lanka, South Africa, St. Lucia, Syria, Tanzania, Togo, Uganda, Venezuela, Vietnam, Zambia, Zimbabwe - have significant natural and mineral resources. The common challenge among these countries however is the lack of expertise to develop these minerals into products that would contribute to their countries' economic development. This is due to the lack of skills in specialised areas that would enable the minerals beneficiation value chain, for example, from extraction to manufactured products as indicated in the Figure below.



The proposal for the capacity building programme in Minerals Processing and Beneficiation came as a result of the workshop hosted by the Department of Science & Technology (DST), Government of South Africa in collaboration with the NAM S&T Centre in September 2012. The recommendations made in this workshop laid emphasis on the development and

implementation of sustainable and appropriate minerals development, processing and beneficiation policy and promotion of human resource development in this area.

In order to help fill the skills and capability gaps in the minerals beneficiation value chain, DST (South Africa) has proposed to initiate a Training Fellowship on Minerals Processing and Beneficiation for the scientists, technologists and policy makers of the NAM S&T Centre's member states, which will also indirectly address common challenges of sustainable economic development and growth faced by the NAM S&T Centre member countries and other developing countries. This initiative will develop capacity building in these countries through exposure to new technologies in the areas of mining and minerals.

II. Objectives

The overall objective of the Fellowship scheme is to provide insights on the entire minerals processing and beneficiation chain to allow the Fellows to influence policies and establish structures in their countries to address the related challenges. This programme will further provide the Fellows with the knowledge on Minerals Processing and Beneficiation and expose them to the basic principles and relevant developments in the field so that they can apply modern techniques for understanding process operation and understand the impact of these technologies on the environment and processes for their mitigation.

This programme will bear direct and indirect benefits for the Fellows from the member countries of the NAM S&T Centre and the host country, South Africa, through creation of networks and exposure to new developments in mineral processing and beneficiation. This initiative will further profile South Africa as the preferred destination for advanced research and development in minerals processing and beneficiation.

III. Programme Contents

The programme will focus on the following three areas:

1. Policy Training

The training is meant for policy makers and government officials to gather information on how to drive policy formulation and implementation in the Minerals Processing and Beneficiation field and assist the trainees in their home countries in this regard. The training materials will also include sustainable mining. The outcomes of the training will cover:

- Policy landscape in Minerals Processing and Beneficiation.
- Share best-principle on Minerals Processing and Beneficiation.
- Develop a set of guidelines and tool kit for minerals processing and beneficiation.

2. Processing Options/Technologies

This training is meant for professionals already working in this field with limited exposure to modern, advanced and new ways of minerals processing and beneficiation, which include:

Basic Minerals and Mining

This will expose the trainees to basic mining and minerals practices, theory, science, technology and application of extracting and processing minerals from a naturally occurring environment. It will also include the processing of minerals for value addition and responsible care in handling of the waste outputs.

Advanced Minerals Processing and Mining

This will expose the trainees to advanced ways of minerals processing including practical experimentation with modern machinery.

Analytical facility

The trainees will also get an opportunity to be taught and be involved in the process to test, inspect and verify minerals components including the usage of inorganic analytical chemistry laboratories and state-of-the-art instruments employed in minerals processing.

Advanced Beneficiation

In this phase, the trainees will be exposed to the beneficiation chain, which will include access to laboratories, technologies and facilities employed in advanced beneficiation.

3. Beneficiation options/or Technologies

This training will provide the participants with beneficiation options to suit their requirement and the level of processing advancement in their respective countries.

IV. Number of Fellowships

Approximately twenty (20) scientists, technologists and professionals from the NAM S&T Centre's member countries will be selected under the Programme in 2019 to get affiliated with the South African host institution, MINTEK.

V. Duration and Structure of Programme

The selected Fellows will be hosted and attached to MINTEK (www.mintek.co.za) for a period of three months (***12 August to 1 November 2019***) being exposed to MINTEK ways of minerals processing and undergoing in-service training under the existing MINTEK programmes. The Fellows will be attached to an existing MINTEK project relevant to their scientific background and interests.

VI. Eligibility

- Applicant should possess at least a Master's Degree in any relevant science subject or an equivalent degree in engineering or technology.
- Applicant should be working in a Government Ministry, department, agency or institution or a private industry dealing with minerals processing and beneficiation programmes in his/her home country. The application should be endorsed by the Head of his/her institution confirming that if selected, he/she will be sanctioned leave for the period of the Programme and will join his/her duties back in the organisation on completion of the Fellowship in South Africa.

VII. Financial and Other Terms

- DST, South Africa as the host country will provide local hospitality for the Fellows for the duration of the training. A subsistence allowance of ZAR3500 (South African Rands) per month will be paid to the selected Fellow for meals, miscellaneous expenses and local transportation. Accommodation and daily transportation to and from the MINTEK will be covered by DST of South Africa.

- International Airfare will be borne by the Fellow or his/ her sending government / organisation.
- Individual Fellows or their governments / institutions will also be required to bear the following costs:
    - ❖ All expenses in the home country incidental to travel abroad, including expenditure for passport and visa, required medical examinations and vaccinations and miscellaneous expenses such as internal travel to/from the airport of departure in the home country.
    - ❖ Salary and other related allowances for the Fellows during the Fellowship period.
    - ❖ Cost towards medical insurance to cover the period of Fellowship in South Africa.
- The NAM S&T Centre and DST South Africa will not assume responsibility for the following expenditure on the Fellow:
    - ❖ Insurance, medical bills or hospitalisation fees.
    - ❖ Compensation in the event of death, disability or loss of personal belongings or compensation for damage caused by climatic or other conditions.
    - ❖ Travel and other costs incurred by the dependents, who might accompany the Fellow.

VIII. Submission and Selection of Applications

- Applications for the fellowship should be submitted in the prescribed format (attached) directly to Mr. Selby Modiba at (Selby.Modiba@dst.gov.za), Ms Palesa Motsoeneng at (Palesa.Motsoeneng@dst.gov.za) and **and Ms. Karabo Mphogo** (Karabo.Mphogo@dst.gov.za) DST, South Africa. Incomplete applications will be rejected. **Last date for submission of applications: 15 May 2019.**
- Approximately twenty fellows will be selected each year out of all the applications received based on the professional details furnished by the applicants.
- In matter of selection, the decision of DST, South Africa shall be final which will also send the Fellowship Award Letters to the selected applicants.

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CENTRE FOR SCIENCE AND TECHNOLOGY OF THE NON-ALIGNED AND OTHER DEVELOPING COUNTRIES (NAM S&T CENTRE)
and
DEPARTMENT OF SCIENCE & TECHNOLOGY (DST), REPUBLIC OF SOUTH AFRICA IN COLLABORATION WITH MINTEK

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NAM S&T Centre – DST (South Africa) Training Fellowship on Minerals Processing & Beneficiation (2019)

APPLICATION FORM

(Please TYPE or use BLOCK capitals; No column should be left blank.)

Affix

Recent Photograph

SECTION A
(To be filled in by the Applicant)

1. **Name (Dr/Mr/Mrs/Ms): _____**
   (as in Passport)
2. **Designation (Position held) _____**
3. **Nationality:_____**
4. **Date of Birth:_____ Place of Birth (City) _____ (Country)_____**
5. **Passport No. _____ Place of issue:_____**
   Date of Issue:_____ Valid up to:_____
   (Please attach a copy of the Passport)
6. **Full Address (Home): _____**
   _____
   Phone:_____ Fax: _____ E-mail: _____
   Mobile Phone: _____
7. **Name of the Parent Institution (employer): _____**
   Full Address (Office):_____
   _____
   Phone: _____Fax:_____ E-mail: _____
8. **Academic Qualifications:**
   Highest Degree: _____ Year of Award: _____
   University:_____ Field of Study: _____

(Please attach copies of Degree Certificates.)

9. Brief Curriculum Vitae, including Professional and Research Experience (to be attached on a separate sheet).

Signature of applicant: _____

Date _____

SECTION -B

RECOMMENDATION OF PRESENT EMPLOYER

(The Applicant must get the application recommended by the Head of his/her Present Employer)

The application of Dr./Mr./Mrs./Ms.……for the NAM S&T Centre – DST (South Africa) Training Fellowship on Minerals Processing & Beneficiation (2019) in South Africa is recommended for consideration. If selected, Dr./Mr./Mrs./Ms. ……..…will be sanctioned leave for the Fellowship period and will join his/her duties back in this Organization on completion of the Fellowship period in South Africa.

Name of the recommending officer (in Full) _____

Designation: _____

Place: _____ Signature:

Date: _____ Seal:

CheCk List for the enCLosures to be attached:

i) Copy of Passport

ii) Copies of Degree Certificates

iii) Brief Curriculum Vitae (including Professional and Research Experience).