# CONSULTANCY V · I · S · I · O · N

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CONTENTS




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***Somenath Ghosh***

**Editor :**
***J. Suriyanarayanan***


## OUR MISSION

**"To be the National nodal point for the development and promotion of Consultancy"**

## OUR OBJECTIVE

**"To strengthen consultancy capabilities and promote services, enhance consultant-client interaction and act as a policy facilitator"**


**CONSULTANCY VISION**

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## From DG's Desk

The last quarter of January – March, 2004 was quite an eventful one, for CDC. The Seventh National Consultancy Congress was as usual an annual congregation of consulting community where many new ideas were discussed and debated. There were programmes on "Balanced Score Card – A tool for optimizing corporate value chain" ; Socio-economic & environmental engineering studies of projects" ; "Talent Management" and "Managing your time effectively".

We had decided in the beginning of the year to focus upon specific sectors like environment, energy etc. In this direction, CDC organized two seminars on Urban Waste Management in January, 2003 and November 2003, which were very well received by consultants and other stakeholders. I feel that this is an area which is of national and international significance and holds considerable promise for consultants, as well.

Energy sector is another area where a lot of action is expected in the coming years. Energy efficiency in all sectors of economy is a need of the hour and consultants can really lead the energy efficiency drive in the country. We have constituted an "Energy Group" in CDC which is represented by well known experts in this field, consultants and policy makers. An interactive session on "Moving Markets for Energy Efficiency in India" was recently organized. The response to this event was overwhelming. CDC plans to organize a series of events on this theme. I am pleased to invite all those who play a role in improving energy efficiency to participate in these events.

CDC also procured a study assignment for a World Bank Project on "Environmental and Social Review of Carbon Tetrachloride (CTC) Sector Phase Out Plan Implementation in India" being executed through Ozone Cell of the Ministry of Environment & Forests, Government of India.

We look forward to a much more exciting and rewarding financial year for CDC as well as the consulting community.

**Somenath Ghosh**

# I. ROMELT TECHNOLOGY FOR TREATING MUNICIPAL SOLID WASTES (MSW)

***by J.S.Saluja,***
***Managing Director, Romelt-Sail (India) Limited***

The disposal of Municipal Solid Waste (MSW) is a universal problem. In India, the situation relating to disposal of municipal waste is generally alarming. The Municipal Corporations in India are unable to manage the quantities of wastes generated every day which are increasing in geometric proportions year after year. A number of methods have been tried without much success.

## Municipal Solid Wastes (MSW) Generation in India

The quantity of MSW generated depends upon a number of factors such as food habits, standard of living, degree of commercial and industrial activity. Besides, the quantity of urban solid waste generation varies seasonally also. For the city of Delhi, generation of MSW is reported to be 6500 t/day and is likely to reach 10,000 t /day by another decade. Physical characteristics of Municipal Solid Waste generated by the Metro cities vary from place to place. As reported in 1994, the composition of MSW for Delhi in percentages is given below :

| Name of metro city | Paper | Textile | Leather | Plastic | Metal | Glass | Ash, fine earth and others | Bio-degradable matter |
|---|---|---|---|---|---|---|---|---|
| Delhi | 6.6 | 4.0 | 0.6 | 1.5 | 2.5 | 1.2 | 51.5 | 31.78 |

## MAJOR TECHNOLOGY OPTIONS AVAILABLE FOR MSW DISPOSAL

1. Land Filling
   Generally, MSW is disposed off by dumping in low-lying grounds as a land fill. This is the cheapest and the easiest form of disposal, nevertheless, it requires huge area of low lying, preferably fallow lands, around the city which is increasingly becoming scarce, particularly for a small state like Delhi. Besides, this method leads to various types of communicable diseases and ground water contamination in the vicinity of the dumping area

2. Composting
   This method involves segregating biodegradable wastes and using them for biodegradation to produce Compost, which can be used as manure. This is a viable method, but has not achieved the desired results so far. The compost plants in Delhi are facing problem in selling the compost, which in turn is hampering plant operation.

3. Fuel pelletization /Refuse derived fuel (RDF)
   Another tried technology is to manufacture Refuse Derived Fuel (RDF) from the combustible component of MSW by Pyrolysis, which can be used as domestic fuel and used in the industrial ovens etc. This method also has its problem of selling the product in the cities, where these can be produced.

4. Incineration
   Low temperature incineration produces toxic gases and the ashes thus produced, need environment friendly disposal. Moreover, the bio-degradable fraction of MSW cannot be easily incinerated because of low calorific value and high moisture content, without support of external fuel.

In choosing the method for solid waste disposal, the following factors may be taken into consideration.

- The solid waste disposal method should lead to sustainable development of the urban areas and not choke these to slow death.
- making the best possible use of natural resources, either by recovering energy or byproducts.
- avoiding secondary pollution, which may generate more hazard than that by the original waste.
- obtaining the best balance between sustainability, economy and efficiency. New methods of waste management vary widely, because, no two methods have the same problems. No single method would suit all the cases. The method of land dumping/filling is the most widely used method of solid waste disposal. As in this method of MSW disposal, other methods of MSW treatment practiced as of now, are not pollution-free operation.

## THE ROMELT PROCESS FOR TREATING MSW

Till now, there has not been any answer to the problem of disposal of MSW in an environmental friendly manner. **The Romelt technology, developed by Moscow Institute for Steel and Alloys (MISA)**, though primarily developed for extraction of iron from any iron bearing material/wastes , has now been made suited to cover MSW as well. There is now an answer to the vexing problem of MSW treatment.

## The furnace and the process

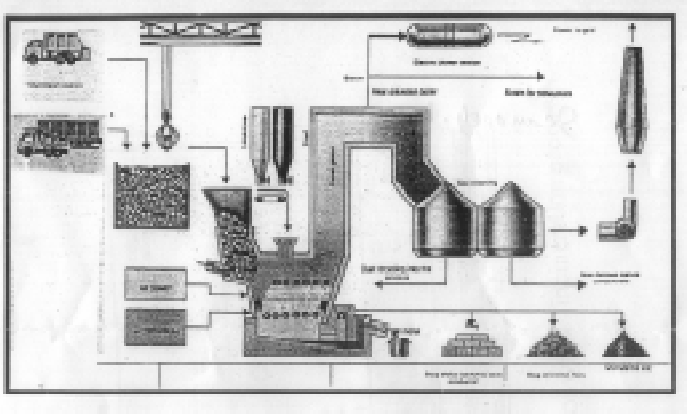

**Figure-1**

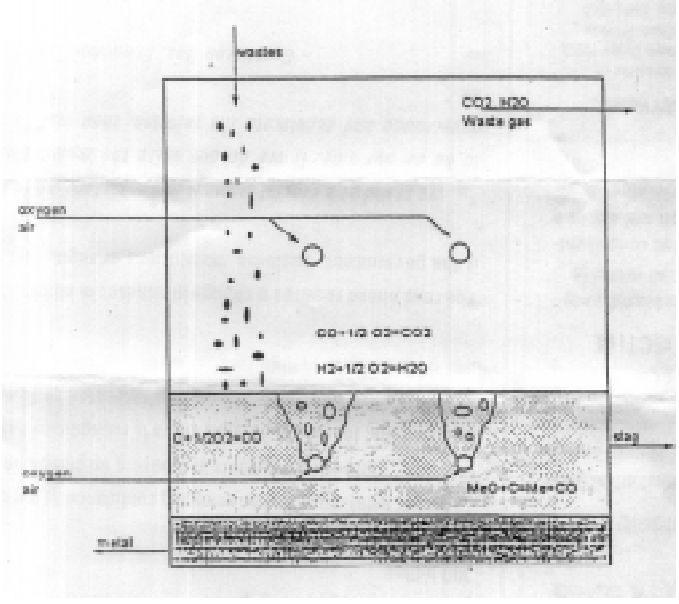


**Figure-2**

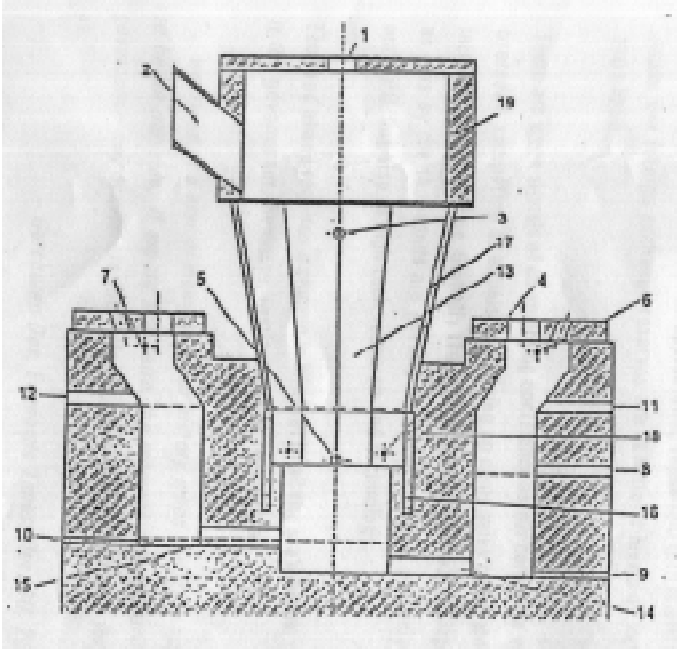


**Figure-3**

The Romelt wastes incineration system is shown schematically in **Figure-1**. The diagram of waste incineration process is shown in **Figure-2.** Romelt MSW treatment furnace is schematically shown in **Figure-3.**

The process takes place as follows: The furnace lining is dried and preheated. Then a slag bath is formed in the furnace by charging and melting granulated blast furnace slag from steel plants. After the slag bath temperature is brought up to the working level of 1350-1500 $^{0}$ C, the furnace charging with wastes starts. The furnace temperature should be 50-100 $^{0}$ C above the slag liquidous temperature for the slag to be tapped from the furnace.

The wastes are discharged from the bunkers by proportioning devices onto the collecting conveyors, then these get into the furnace through a hole in the furnace dome and get into the slag bath in the furnace.

The slag bath is blown through the side tuyeres by a blast which is a mixture of oxygen and air. In doing so, the slag bath is divided into an upper bubbled zone and a lower under-tuyere zone of slowly mixed slag. After getting into the bubbled zone, the wastes are mixed into the melt and distributed along the slag bath volume by streams of slag.

The mineral portion of the wastes gets dissolved in the slag melt. To correct the slag chemical analysis and to ensure its fluidity at the furnace operating temperatures, flux is added depending on the composition of the mineral content of the wastes. Lime, lime- stone, converter (LD) slag etc. are common fluxes which are used.

Carbon remaining in the wastes after the exit of the volatile components is oxidised by the blast oxygen through the blowing tuyeres. The carbon is usually oxidised to carbon monoxide and partly to carbon dioxide. The carbon monoxide as bubbled through the slag reduces the iron oxides present in the waste ( scale etc.) to liquid iron along with the iron scrap available in the waste and settles at the reactor bottom after carbonization.

Additional fuel may be required to support the system if the carbon content in the waste is not sufficient. Natural gas supplies along with the blast to the blowing tuyeres can be used as an additional fuel. Other carbon rich wastes like spent automobile tiers, coal rejects or coal, oil refining wastes, wood processing wastes can be also used.

Combustible gases generated during exit of the volatile components, partial burning of waste carbon and additional fuel in the slag melt

volume are subject to post combustion above the melt surface by oxygen supplied to the second tuyere system. (vide Fig. 2). The post combustion heat generated is distributed between slag bath, furnace water cooled elements and flue gases. 50-70% of the post combustion heat generated can be transferred to the slag bath.

The post combustion gases are removed from the furnace at a temperature of 1400-1600 $^{0}$ C with the help of ID fan via a waste heat boiler and dust cleaning system.

Among the different metals present in the waste, Fe, V, Ni, Cr and Cu mostly goes to metal and some to slag. While, most of alkali, Zn, Cd, Hg, Pb and Sn goes to the waste gases. S present in the waste, mostly is arrested along with the dust in the catchers and thus, the toxicity of the flue reduces.

Low dust discharge ( Less than 1%) is a salient feature of the technology. Since the process uses oxygen or enriched air, the volume of gas is much less as compared to simple incineration by air. The low volume of waste gases along with the effect of liquid slag drops ensures low dust generation. Further, usage of oxygen ensures low Nitrogen Oxide in the waste gases after complete post combustion in the boilers. The level of Nitrogen Oxide is lower than 100 mg/nm3 and usually it is 50-70 mg/nm3.

The accumulated slag is tapped in continuous or batch mode. The slag is tapped from the poorly agitated area under tuyeres. It helps to avoid contamination of slag by carbon matters present in the wastes. This is because the density of these carbon matters is lower than the density of slag and these will be kept in the zone of barbotized slag till their complete incineration.

The slag is homogeneous, is of low iron content and suitable for the production of various construction materials like crushed stone, mineral wool, stone casting, cement etc.

The Romelt process is the latest in the '**Waste to Energy**' systems now gaining popularity in the world and now encouraged by the Govt. as a means of non-conventional energy source.

This process can simultaneously process all types of MSW, viz. bio-degradable, recyclable and inert, along with hospital wastes and non-toxic industrial wastes. However, non-combustible materials in the MSW may be segregated from the feed to improve thermal efficiency of the process. No other process does have the same range of MSW that can be simultaneously treated.

## OPERATIONAL ADVANTAGES

1. Improved ecological indices. Complete dissolution of detrimental compounds.
2. Smaller capital cost per tone of the processed wastes.
3. Useful products.
4. High reliability, versatility and safe operation.
5. Extraction of metals likes iron, copper, nickel etc. from wastes also possible, if required.
6. Lower operational cost for processing of the Municipal waste.

## ENVIRONMENTAL ADVANTAGES

1. Presence of noxious gases in the exhaust gas is low and within permissible limits.
2. Low quantities of organic compounds and, in particular, dioxins in the exhaust gas.
3. Process promotes binding of chlorine, fluorine, sulfur oxides into safe compounds trapped by gas cleaning as solid particles of dust.
4. Oxygen usage, instead of air, allows drastic reduction of the volume of fumes, facilitates their cleaning and decreases discharge of toxic matters into atmosphere.
5. Instead of large amount of ecologically dangerous ash residue, containing heavy non-ferrous metals and dioxin, inert slag is produced which is a valuable raw material for the production of construction materials.
6. The dust discharged from the furnace with fumes and trapped selectively at different stages of cleaning is much lower than that in a conventional furnace. Coarse dust is recycled into the furnace.

### *Furnace Modules, Cost and Technological Indices*

*MISA, based on the trials done at the Lipetsk Romelt Plant and semi-commercial plant at Riyzan, had designed a 1 ton/hr demonstration MSW treatment plant for Samsung Industries, Korea. In 1997-98, three trial campaigns have been mastered with different types of wastes.*

MISA today has furnace designs with 1, 5, 10 and 15 ton/hr capacity of processing MSW. Since the MSW composition from region to region varies significantly affecting the usage of fuel , Oxygen etc. it is expedient to start with a trial unit of say 5t/hr ( 100 t/day or about 30,000 t/ year capacity for treatment of MSW) to arrive at the optimum solution at a given condition, say for the city of Delhi. The major inputs to the treatment plant other than MSW would be Fuel (Coal, oil or Natural gas), Oxygen , flux (Lime) and Compressed air. The waste gases would have under specified condition, heat value equivalent to 36.5 Gj/Hr which is equivalent to about 600 KWh/t of MSW processed. Since the process uses oxygen that is costly, recovery of waste heat is a must. Even though the process could be costlier in comparison to other processes conventionally employed, the increased cost would go towards ensuring a perfect environment condition.

**Area Required :**Plant with output capacity 100,000 t/year occupies the area less than 2Ha

**Capital cost :** No work has been done for calculation of the plant cost under Indian condition. However, a pilot plant of 100t/day capacity may cost about Rs. 20 Crores. The estimate will be firmed up after development of the Feasibility Report. Further, the cost of the commercial plant will be worked out after establishing the technological and technical parameters based on local condition, from the pilot plant's working.

### Recommendation

Disposal of MSW in an environment friendly manner, without generating secondary pollutants, is a social responsibility of civic authorities and the Government. Governments, world over, are spending billions of dollars for treatment of various types of wastes to preserve environment. In India too, huge amounts are being allocated by the Government as well as the Industry to deal with the problem of treatment of wastes which are polluting rivers, underground water, agricultural land, oceans etc. We are all aware of the large funds being granted for cleaning of Ganges, Yamuna etc. The funds for all such schemes are provided either through budgetary support or by grants from international organisations like World Bank, WHO etc. These are required for sustenance. Such investment should not be viewed from the point of monetary returns- IRR, NPV etc. After all, nobody looks for IRR while spending on medical treatment. Investment to promote a cleaner environment in India, a country already polluted beyond limits, should be viewed in a similar way.

In view of the above and for making India a developed Nation, it is essential that those technologies which can treat solid wastes in an environment friendly manner, be encouraged. Funds should, in no way, be a hindrance. It is, therefore, strongly recommended that the required funds for setting up of a pilot plant of 100 tonnes per day capacity for treatment of MSW be considered and approved by the Government on priority. If Russian technologies have all along proved to be successful whether in steel industry, mining, aluminium, power, defense etc., we can certainly try the Romelt process as well, for treatment of MSW. With the past experience of India working with Russian equipment and technology, there should not be any doubt that this new venture to treat MSW with the Romelt Process will also be a success.

## II. Application of "Geology in Construction of Sustainable Engineered Landfill"

***by Dr. Vijay K. Chaudhry, Intercontinental Consultants & Technocrats Pvt. Ltd., New Delhi***

*"Landfill is just like a dustbin in house. If dustbin is properly constructed and is of recommended material of construction. It will serve the purpose of a good housekeeping. A leaking and overflowing dustbin would attract rodents and flies, consequently endanger the health of inhabitants of the house. Similarly a landfill is a dustbin on the surface of earth, if material of construction of it (in this case Geology) is not favorable, it would endanger the health of whole city or country".*

### 1. Introduction

On average Delhi generates 5000 to 6000 M.T. of garbage every day, which is necessarily to be disposed off in SLF sites. If sites selected have highly permeable strata, groundwater would get contaminated.

Sitting of a landfill is of paramount importance at the planning stage it self to fulfill the requirements of The Gazette of India: Extra ordinary issued by Ministry of Environment & Forests vide its notification of October 3, 2000.

In view of the above mentioned the importance of geology in construction of landfill can not be underestimated.

## 2. How geology can affect the groundwater quality/ receptor:

The steps involved in the deterioration of groundwater quality in chronological order are as follows :

1. Dumping of municipal solid waste in to landfill
2. Leachate formation due action of water on MSW and simultaneous release of entrapped moisture from organic matter
3. Movement of leachate through secondary openings present in rocks and soil due the action of gravity and capillary action
4. Diffusion of leachate in to groundwater source
5. Pumping of water by hand or motor for the consumption by receptor
6. Receptor situated at a distance equal to the pathway or joint or fracture gets affected

## 3. How geology can determine the site for a landfill

Under the conditions of depositions it has been postulated, that the series of horizontally stratified beds are formed resting one on top of another. It follows that, if the ground were flat, the whole surface of the country would be composed of one sort of rock and one could tell nothing of the underlying rocks without drilling.

If, as result of denudation, however, the ground were undulating, it is obvious that various members of the sequence will appear or crop out at the surface. It follows that, unless there has been extensive folding, the newer beds will tend to occur on the higher ground.

There are three types of rocks namely igneous, sedimentary and metamorphic that are mainly responsible for making the site favorable or unfavorable.

- Igneous Rocks are originated from the magma and well crystallized and offer low permeability. Leachate movement from the source to receptor would be highly restricted. Hence the site consisting of igneous rocks are favorable for the construction of landfill.
- Sedimentary Rocks are formed due to physical action of water. They are well stratified and are folded. These rocks can be favorable or unfavorable depending upon the types of rocks and the presence and orientation of secondary openings viz. joints, fractures, fault plains. Favorable site could be shale, which is highly impermeable while a sandstone formation may be highly permeable, consequently is not a favorable site. Sedimentary rocks also have many secondary openings which act as pathways for the movement of leachate from the source to the receptor.
- Metamorphic Rocks are formed due physical, chemical and thermal reactions on sedimentary and metamorphic rocks. Depending upon the origin and orientation of crystals, presence of secondary openings could be either favorable or unfavorable. For example a highly crystalline quartzite rock with no or minimum number of joints could be favorable site. However, a fractured and jointed metamorphic rock would offer pathways for the movement of leachate.

## 4. Significance of Geomembrane :

As per guidelines of Ministry of Environment and Forest (its notification of October 3, 2000), landfill must be lined by geomembrane of thickness 60 mil. Geomembrane in combination with favorable rocks would give higher quarry integrity index as explained in the technical paper of the author titled “Restoration of Hydrological Cycle By Using Dental Model” (Soil & Rock Conference 2003 proceedings, Massachusetts Institute of Technology, USA. For example geomembrane in combination and compatible with impermeable rock would be much more sustainable than with a permeable rock and would make better dustbin as compared to a combination with permeable rock.

## 5. Conclusion :

Since the landfill is located on the crust of earth, types of rocks and their secondary openings act as pathways for the movement of leachate from the source to the receptor. Hence a thorough investigation of geology of an area is of paramount significance while constructing the landfill.

## SEVENTH NATIONAL CONSULTANCY CONGRESS

Seventh National Consultancy Congress on "Competitive Capability through Emerging Technologies: Role of Consultants" was held from 15-16th January, 2004 at Convention Centre, India Habitat Centre, New Delhi. The event was inaugurated by Hon'ble Shri K.C. Pant, Deputy Chairman, Planning Commission and the Keynote Address was delivered by Dr. R.A. Mashelkar, Secretary, DSIR and DG, \CSIR. National Awards for excellence in consultancy services were presented during the Inaugural Session. A CD containing searchable database has been prepared and the same was released by Dr. R.A. Mashelkar, Secretary, DSIR during the Inaugural Session.


The event was supported by Oil and Natural Gas Corporation Limited, Housing & Urban Development Corporation Ltd., Intercontinental Consultants and Technocrats Pvt. Ltd., National Thermal Power Corporation Limited, Oriental Structural Engineers Pvt. Ltd., Power Grid Corporation of India Limited, The National Small Industries Corporation Limited, Telecommunications Consultants India Limited, Engineers India Limited and co-sponsored by Engineers India Ltd., Hindustan Construction Co. Ltd., Larsen & Toubro Limited (ECC Division), LG Engineering & Construction Corporation and Power Finance Corporation Limited.

The prominent speakers during the Congress include: Dr. R.A. Mashelkar, Secretary, DSIR and DG, CSIR, Prof. P.V. Indiresan, Ex-Director, IIT Chennai, Dr. Rajan Saxena, Director, ICFAI Business School, Mr. K.K. Sinha, Director (HR), NTPC, Mr. Sharat Bansal, Country Leader-IBM Business Consulting Services India, IBM Global Services India Pvt. Ltd., Mr. B.M. Khera, ED, RITES, Mr. D.K. Jain. Director, NTPC Alsthom Services Ltd., Dr. K.P. Nayati, Head Environment Division, CII, etc.

### Annual Consultancy Awards for Excellence in Consultancy Services

***National Awards for Excellence in Consultancy Services*** were presented to the following Awardees during the Inaugural Session of the Seventh National Consultancy Congress on 15th January, 2004.

- **1st Prize Shield – L&T-Chiyoda Limited** – for the project *"INDMAX"*

- **2nd Prize Shield - Intercontinental Consultants and Technocrats Pvt. Ltd.** for the project *"Construction Supervision of Awash Arba-Gewane Section (Contract 2) of Modjo-Awash-Mile Road Rehabilitation Projects, (IDA funded)"*

## Certificates of Merit:

- **Ma Foi Management Consultants Ltd.** for the project "*World bank assisted Maharashtra health systems development project*"

- **R. Singh & Associates (P) Ltd.** for the project "*HOT STRIP STECKEL MILL*"

## Exhibitions/ Trade Shows

The Centre organized an exhibition during the 7th National Consultancy Congress from 15-16 January, 2004 at India Habitat Centre. In addition to sponsors and co-sponsors, other members, mainly R&D laboratories participated in the exhibition.

- **2 Day Awareness-cum-Implementation Programme on "ISO 9001:2000 QMS"**

CDC in collaboration with Human Resource Development Centre (HRDC), CSIR organized the subject programme on 29 – 30 January, 2004, which was attended by 20 scientists from CSIR headquarters and various R&D laboratories operating under CSIR.

- **One day Sensitisation Programme on "Balanced Scorecard – A Tool for Optimising Corporate Value Chain"**

CDC organized the subject programme on 31st January, 2004 in which 21 participants from government and private sectors attended the programme. Dr (Mrs) Usha Dar, Chairperson, Foundation for Research & Training on Environmental Management and Mr. Somenath Ghosh, DG, CDC were the faculty for the programme.

- **Workshop on Socio-Economic and Environmental Engineering Studies of Projects: February 26-27, 2004**


CDC in association with Intercontinental Consultants & Technocrats Pvt Ltd. (ICT) organized the subject workshop on February 26-27, 2004 in New Delhi for the benefit of its members. The workshop was attended by 18 professionals from various consultancy organisations.

## MONTHLY MEETS

- Monthly Meet was organised on 27.01.04. On the occasion, Shri Ashok Kumar Arya, Chairman, OD Consultants (P) Ltd. gave a talk on "How to Manage Your Time Effectively". The Meet was attended by members and officers of CDC.
- A presentation on CDC National Award winning Project "Steckel Mill Project at Shah Alloys, Ahmedabad" was given by R. Singh & Associates (P) Ltd, during the Monthly Meet held on 24th February, 2004 in CDC

## STUDY ASSIGNMENTS

Following 2 New study assignments were obtained during the year.

- Preparation of Feasibility Report and Detailed Project Report for Renovation,Refurbishing and Rehabilitation of CSIR Laboratories Buildings and its Infrastructure and Development of New Campus for Central Drug Research Institute (CDRI), Lucknow.
- Study on Environmental & Social Review of Carbon Tetrachloride (CTC) Sector Phase Out Plan Implementation in India.

Proposals have been submitted to several agencies including Government departments and some of them are likely to materialize by March, 2004.



## Seminar on Urban Waste Management - 16-17 April, 2004

CDC in association with the Institution of Public Health Engineers, (IPHE) North India Centre is organizing the subject seminar on 16-17 April, 2004 at India International Centre Annexe, New Delhi. The Seminar will cover the following :

- The management of urban wastes, both sewage and garbage, are facing increasing problems of collection, conveyance, treatment and disposal. As congestion increases in urban areas and sites for treatment and disposal of wastes become difficult to find, the problem tends to become more and more severe and complex. Therefore, though the problem is old, it bears a fresh look to solve it with modern methods of management and technological applications.

- On the technological side, new approaches may include cost-effective methods of treatment, application of decentralised systems in preference to centralised systems of waste treatment and disposal, trenchless technology for laying pipelines with minimal disturbance to traffic, instrumentation for effective monitoring and process control, and recovery of energy and other reusable resources from wastes. An appraisal of methods adopted to reduce costs may be made to find whether new risks have been inadvertently introduced.

- On the financial side, the costs of installation, operation and maintenance, the criteria for determining tariff for services or price of products recovered in the treatment process may be discussed with data available from the works done under the Ganga Action Plan and other programmes.

- On the institutional side, the scope and usefulness of privatisation, the role of expertise in engineering, health, marketing and management, and public participation may be considered in all details.

For registration and other details on the seminar, please contact Hony. Secretary, IPHE, North India Centre, 154 Nirman Apartments, Mayur Vihar Phase-1, Delhi 110091. Details of the Seminar are also available at http://cdc.org.in/eventu1.asp?id=157.

## Following Consultants/organisations have been included as CDC Members during the Period Jan-Mar'04.

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ICT (Pvt.) Ltd.
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## ICT signed MOU with SAIN, a Mongolian Computer Firm

During the visit of H.E. Mr. Nambar Enkhbayar Hon'ble Prime Minister of Mongolia, a MOU was signed between Mr. K.K. Kapila, Chairman and Managing Director of Intercontinental Consultants and Technocrats Pvt. Ltd. (ICT) and Mr. T. Gantsog, Chairman and Managing Director of SAIN, a Mongolian Computer firm on 15th January 2004, at a function jointly organized by FICCI and CII.

The ceremony was attended by the Prime Minister of Mongolia, and Minister of State of External Affairs besides officials from FICCI and CII and the business delegates.

ICT, an ISO 9001 certified company, has been closely associated with the Infrastructure development in Mongolia since 1993. ICT has a total staff strength of over 1200, and has been working in 24 countries including Mongolia, Nepal, Bangladesh, Philippines, India, Tanzania, Ethiopia etc for the past 15 years. It is ranked as one of the top 100 consulting firms in the world.

# I. Library Facilities Extended to CDC Members

## a) CDC Library

Consultancy Development Centre library has a large collection of books / reports and other documents useful for consultants which cover Consultancy, Engineering, Management, Quality, Project Management, HRM, Marketing and other relevant subjects. A good number of FIDIC publications are also available in the library.

Apart from this the library subscribe to 36 magazines and journals of interest to consultants, some of which are listed below.

- *Consulting to Management C2M*
  *The Journal of Management Inc., USA*
- *Knowledge and Process Management: Journal of Corporate Transformation.*
  *Inter Science, USA*
- *Harvard Business Review*
  *Advanced Management Services*
- *Engineering News Records*
  *McGraw Hill Construction, USA*
- *The Economist*
  *Economist Group, U.K.*
- *Management Review, IIM,Bangalore*

Now library facility is available to CDC members based in Delhi not only for reference but also for issue of books. On obtaining library membership members would be able to get one book issued for 15 days and can visit the library and refer any of the documents on working days from 9.00 A.M. to 5.30 P.M. CDC members who wish to avail of the above library facilities are requested to fill the attached membership form and send the same to us along with a cheque/D.D. for Rs.1500/- towards security deposit refundable on termination of membership.

## b) Library facilities of professional bodies/ corporate houses

CDC had requested various professional bodies, corporate houses and other organisations seeking permission for CDC members to access their respective library services in order to refer and borrow books and journals. In response to our request –

- ***Telecommunications Consultants India Limited (TCIL)*** have kindly agreed to permit CDC members to use their library facilities which are located at *6th Floor, TCIL Bhawan, Greater Kailash-I, New Delhi*, subject to proper authorization by CDC.
- ***Confederation of Indian Industry (CII)*** have agreed to permit CDC members to refer to books and journals at CII library located at their *Gurgaon office*.
- ***Engineers India Limited (EIL)*** have agreed to allow CDC members to access their library located at EIL Bhawan, for reference of books and journals on specific request basis.

# II. CDC's local Chapters in Metros and other cities

CDC has recently established its chapters in ***Bangalore, Chennai, Hyderabad, Kolkata and Mumbai*** in collaboration with its local members in order to benefit its members and other consultants operating from the respective region. The local chapters would act as extended arms of CDC and undertake the following activities :

i) Enrollment of new members
ii) Interaction Meetings of members
iii) Interaction Meetings with industry associations/ chambers/ government organisations for establishing business links
iv) Training programmes / workshops/ courses relating to consultancy events
v) Database information dissemination to help consultants

**APPLICATION FOR LIBRARY MEMBERSHIP**

I am enclosing herewith a cheque / D.D. No._____dt._____ for Rs.1500/- in favour of Consultancy Development Centre, New Delhi towards the library membership security fee. My membership details are given below.

NAME OF MEMBER: _____

CATEGORY : _____ I.D. NUMBER:_____

ADDRESS (R):_____

ADDRESS (O): _____

TELEPHONE (R) _____ TELEPHONE (O) _____

E-mail: _____ Mobile: _____

Date: SIGNATURE

# National Directory of Consultancy Services 2002

***CDC has published a comprehensive National Directory of Consultants.***

**DIRECTORY provides comprehensive data of 124 consultants and listing of more than 1000 consultants/ consultancy firms. The data includes name, address, year of establishment, contact person, key personnel, turnover, sector/ sub-sectorwise specialization, major projects executed, overseas associates etc.**

**The Directory is extremely user-friendly by alphabetical, city-wise, sector/ subsector/ service wise and strength wise categorization rendering accessibility of consultancy very easy which is essential for enhancing business prospects through networking.**

**Those interested to purchase the Directory, may contact -**


***Mr. S.K. Lalwani, Director***

***Consultancy Development Centre (CDC)***

***IInd Floor, East Court, India Habitat Centre,***

***Lodhi Road, New Delhi – 110 003***

***Tel: 2460-2601, 2915, 1533; Telefax : 011-2460-2602;***

***Email: cdc@vsnl.com***

## COMMUNICATION DETAILS

**Dear Reader**

We would like to know if there are any changes in your ***communication details.*** Please fill in the relevant details given below:

**NO CHANGE** **CHANGE** **NEW READER**

NAME & DESIGNATION: .....

ORGANISATION: .....

ADDRESS : .....

TELEPHONE: ..... Fax:.....

EMAIL/WEBSITE : .....

**Send to:-**

THE EDITOR

CONSULTANCY VISION,

**Consultancy Development Centre (CDC)**

**Zone-IV(B), 2nd Floor, India Habitat Centre,**

**Lodhi Road, New Delhi – 110 003**

**Tel: 2460-2601, 2915, 1533; Fax: 2460-2602**

**Email: surya@cdc.org.in**

Readers are requested to contribute generously for the forthcoming issues of this Newsletter by forwarding valuable articles of interest to consultancy profession. Please also give your valuable comments and suggestions to make this newsletter a Success.

**- Editor**

# GUIDELINES AND APPLICATION FORM FOR MEMBERSHIP

## 1.0 ABOUT CDC

Consultancy Development Centre (CDC) is a non-profit registered society, supported by the Department of Scientific & Industrial Research (DSIR), Ministry of Science & Technology, Government of India. CDC is a pioneer organization in the country for the development and promotion of the consultancy profession.

## 2.0 TYPES OF MEMBERS

In addition to the Founder Members, there are three categories of members:

- Corporate
- Institutional
- Individual

## 3.0 BENEFITS TO MEMBERS

i) All the members of the Centre shall constitute the General Body.

ii) Members are eligible for being elected to the Governing Council as per the election rules. The Governing Council is the apex body of the Centre and has all the powers to manage the affairs of the Centre.

iii) All members are encouraged to participate in events organized by the Centre, such as, Interaction Meets, Seminars, Workshops, Training Programmes, Lectures. In case, there is a participation fee, members are eligible for discounts on the same.

iv) All members shall receive from time to time information about consultancy opportunities in India and abroad in addition to newsletters and other literature of professional interest to consultants.

v) Members shall have access to the database available with CDC at nominal rates.

vi) Members are entitled to use CDC library for reference purposes.

vii) Members shall be given adequate preference while selecting consultants or consultancy organizations for execution of various projects or study assignments sourced or referred by CDC. Members shall also be given preference while selecting consultants or consultancy organizations for financial support for various programmes under the purview of Programme Committee of CDC, e.g., for skills up-gradation of consultants, participation in seminars and conferences abroad, participation in international trade fairs and exhibitions, etc.

viii) Members are entitled to use the business development facilities available at CDC, such as, conference hall and presentation facilities.

## 4.0 ELIGIBILITY FOR MEMBERSHIP

### *4.1 Corporate*

Under this category any Public Ltd., Private Ltd., Partnership or Proprietary company either fully engaged in consultancy business or having a consultancy wing or interested in the consultancy profession, may be admitted as a Corporate member. The criteria for admission is specified by the Governing Council from time to time.

The Governing Council may decide to have sub-categories within Corporate Members with defined criteria for the purpose of entrance fee, subscription, elections to the Governing Council, etc.

The present sub categorization is based on the full time professionals employed by an organization as mentioned below-

| Corporate Membership Sub-categories | No. of Full Time Professionals |
|---|---|
| Category - D | Upto 50 |
| Category – C | 51-100 |
| Category – B | 101-250 |
| Category - A | Above 250 |

### *4.2 Institutional*

Under this category any R&D Institution, Laboratory, Professional Institute or Society, University, Academic Institute, Ministry or Department or Organization of the Government of India or State Government, who subscribe to the objectives of the Centre may be admitted as an Institutional member. The criteria for admission is specified by the Governing Council from time to time.

### *4.3 Individual*

The applicant must be a Consultant having experience in a professional consultancy business, or be in service working in related professional work, in any consultancy organization or company including project or scientific work, in any company or in government, academic or research institution. The criteria for admission is specified by the Governing Council from time to time.

The present criteria for individual membership is :

i) The applicant must have educational qualifications related to the area of consultancy operation and must have at least a professional or specialized degree or equivalent from a recognized institution in the relevant discipline.

ii) The applicant should have experience of 3 years or more in professional consultancy business or 5 years service in related professional work.

iii) The applicant must have completed at least three projects independently as a consultant or while in service, with significant contribution. This may be relaxed taking into consideration the types and the costs of the projects done.

## 5.0 FOREIGN CONSULTANTS

i) If a Foreign Consultancy Company/Organization is registered in India/abroad as a company, then the company is eligible for Corporate Membership of the Centre. Cases other than above type may be decided by the committee on case to case basis.

ii) The present annual subscription rates to be paid shall be as under –

| | |
|---|---|
| Corporate | US $ 1,000 |
| Individual (including NRI) | US $ 200 |

## 6. SUBSCRIPTION

### *6.1 Annual Subscription*

i) The annual subscription to be paid every year shall be as under. However these rates may be revised by the Governing Council as and when considered necessary and shall be payable by the members.

The present subscription rates and entrance fee for different categories of membership are as follows:

| Category | Effective from 01-04-2003 | | |
|---|---|---|---|
| | Sub Category | Amount (Rs.) | |
| | | Subscription | Entrance Fee |
| Corporate | A | 15,000 | 3,000 |
| | B | 10,000 | 2,000 |
| | C | 7,500 | 1,500 |
| | D | 5,000 | 1,000 |
| Institutional | | 7,500 | 1,500 |
| Individual | | 1,000 | 200 |

ii) The subscription period for accounting purposes shall be reckoned from April to March.

iii) If the applicant is admitted in the first half of the financial year (April-September) he will pay the full yearly subscription and in case he is admitted in the second half (October-March) of the year, he would pay only 50% of the annual subscription.

iv) The annual subscription for a year will become due in April of the year and must be paid latest by end June of the financial year. Thereafter the member whose subscriptions are not received will be sent notice for payment within the period as may be decided by the Governing Council.

v) All fees are payable by local cheque or demand draft (in case of outstation members) payable at New Delhi drawn in favour of **Consultancy Development Centre, New Delhi.**

### *6.2 Entrance Fee*

Every new member admitted will have to pay an Entrance fee as decided by the Governing Council from time to time. The present rates are mentioned under section 6.1.

## 7.0 HOW TO APPLY

Application for membership must be made in the prescribed format, which can be obtained from CDC. The annual subscription amount alongwith entrance fee must be enclosed alongwith the application. The application form can also be downloaded from CDC website :www.cdc.org.in/mem_types.asp

## 8.0 MEMBERSHIP COMMITTEE

All the applications received for membership will be considered by the Membership Committee of the Centre and the decision of this committee shall be communicated to the applicant in due course of time.

## 9.0 WITHDRAWL OF MEMBERSHIP

A member shall cease to be a member on the occurrence of any of the following events, namely:

i) On the member resigning his membership and his resignation being accepted by the Governing Council.

ii) On the member's failure to pay his subscription within the specified period after the issue of notice.

iii) On the Governing Council finding by a majority of not less than three fourths of its members present and voting, that the member has ceased to possess the required qualifications for membership.

iv) On a General Meeting of the Centre finding by a majority of not less than two fifth of the members present and voting, that the continuance of the member is prejudicial to the interests of the Centre.

Any member who ceases to be a member may be re-admitted to the Centre on such terms and conditions as the Governing Council may decide.


**CONSULTANCY DEVELOPMENT CENTRE**

***(Supported by DSIR, Ministry of Science & Technology)***

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Fax: +91-11-24602602 Email: sklalwani@cdc.org.in / cdc@vsnl.com
Website: www.cdc.org.in

# CONSULTANCY DEVELOPMENT CENTRE (CDC)

## FACILITATION IN ISO 9000 QMS CERTIFICATION

Consolidating its strengths over the years, Consultancy Development Centre (CDC) is facilitating organizations in the services sector desirous of obtaining ISO certification. CDC provides the following specialized services :

- In-house training on Awareness-cum-Implementation, Documentation and Internal Audit. Status Audit to identify documentation needs for the Quality System to be developed and documented.
- Assistance and guidance in system development and documentation
- Assistance in conducting Internal Audits and Management Review.
- Conduct of external/mock audit to give the Management a status report on the readiness of the organization for certification audit.
- Advice for selection of suitable certification agency and assistance in finalizing action on audit observations and non-conformity reports.

CDC is one of the very few organizations empanelled by Ministry of SSI & Agro-Rural Industry, Govt. of India for providing ISO 9000 Consultancy.

Some our clients are –

1. M/s National Building Construction Corporation Limited (NBCC), Consultancy and Project Management Divisions
2. M/s Gammon India Ltd., Mumbai including all their Regional Offices, Regional Workshops and all their Project Sites all over the country.
3. M/s Singhania & Partners (Solicitors & Advocates)
4. M/s Intercontinental Consultants and Technocrats, New Delhi
5. M/s Central Road Research Institute (CRRI), New Delhi
6. M/s International Print-O-Pac Limited, New Delhi (A leading Packaging and Printing Company)
7. M/s National Institute for Training of Highway Engineers (NITHE), New Delhi
8. M/s U. P. Industrial Consultants Ltd., Kanpur
9. M/s U.P. State Bridge Corporation, Lucknow, Uttar Pradesh
10. Delhi Development Authority (DDA) (Palam Drainage Project)
11. All India Association of Management (AIMA), New Delhi
12. Indian Institute of Petroleum, Dehradun
13. Institute of Himalayan Bio-resource Technology, Palampur
14. Municipal Corporation of Delhi
15. Regional Research Laboratory, Trivandrum

*For further details, please contact Mr. S.K. Sharma, Deputy Director, CDC over*

*011-24603425 or through email : sksharma@cdc.org.in*

*or Mr. J. Suriyanarayanan at surya@cdc.org.in*

"Good Counsellors Lack no Clients"
*Shakespeare*

# Empower yourself with a higher degree in consultancy management

- ✓ Enhance your consultancy skills
- ✓ Enhance your project management skills
- ✓ Enhance your skills for comprehensive problem solving

Birla Institute of Technology (BITS), Pilani in collaboration with Consultancy Development Centre (CDC), offers working professionals a unique opportunity to attain higher degree in M.S Consultancy Management. This four semester degree caters to the requirements of consulting professionals and aims to help them tap the immense market potential in consulting business.

The programme is designed for **working professionals** in business and organisations who:

- Provide consulting services to a client organisation on a contract or project basis.
- Are individual entrepreneurial consultants
- Aspire to work as internal consultants

The programme will be conducted at New Delhi by BITS, Pilani in collaboration with CDC. Regular contact classes will be held every Saturday and Sunday at CDC premises (located at India Habitat Center, New Delhi), which has excellent library and computer facilities. Some contact classes may also be conducted at BITS, Pilani.

All candidates will be enrolled as students of BITS and successful students will be awarded the M.S (Consultancy Management) degree.

**ELIGIBILITY**

**Working professionals located in and around Delhi**, having an Integrated First Degree of BITS or its equivalent like BE, MSc, MBA, MCA, MCom, CA etc. Candidates sponsored by their organisations will be given preference.

For more information, please contact:

The next batch will commence in August 2004 and details including the Application Form will be available on BITs Website www.bits-pilani.ac.in during 1st week of May 2004.

*Programme Coordinator*

**Consultancy Development Centre**

India Habitat Centre, Zone-IV, East Court, 2nd Floor,
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*Website:* www.cdc.org.in

CDC is an organization supported by Department of Scientific and Industrial Research, Ministry of Science and Technology, Government of India. This degree is being offered Under the off-Campus Collaborative Programmes of BITS.