A Revolutionary Technology for Concrete Paving for Roads & Pavements



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A Reputation built on Global quality Roads for the Metro

Venus Buildtech India Pvt. Ltd., established its reputation having constructed major roads for Delhi Metro, during the last one decade.

Venus Buildtech, an ISO 9001 : 2008 Company, has strategically located computerized HMC Plants in Haryana and U.P., for fulfilling the demands for construction of roads in Delhi/NCR.

Most modern Methodology and experienced technical staff ensure high quality material from HMC plants. The quality material used for preparation of bituminous concrete is being governed by the individual specifications conforming to physical requirements specified in Specifications Clauses of Ministry of Surface Transport, Govt. of India.

Strict Quality Control is exercised over the quality of all input materials and processes to ensure global quality. The temperature is maintained automatically for the mixed material for construction of single / multiple layers on prepared surfaces. High grade Bitumen used comply with BIS standards. Mix Design is being adopted in conformity with quality requirements of individual ingredients and Binder used is being optimized to achieve the requirements of the mixture set out and also as per approved job Mix Formula with minimum variations.

At laying site, the surface for laying is prepared by thoroughly sweeping and cleaning by Mechanical Broom and the dust removed by compressed air. Tack coat is applied by Mechanical Sprayer at required rate of spraying. The Mixed material from Hot Mix Plant is transported to site through Dumpers, with proper care to maintain temperature of 130°C up to site. Laying at sites. Laying is executed through Sensor Paver and rolling is done till temperature falls to 80°C through Static Road Rollers of 80-100 KN and intermediate rolling with Vibratory Rollers of 80 – 100 KN and final rolling through Tandem Road Rollers, The road gets ready for plying of traffic after 24 hours of final rolling of Wearing Course. The Q-Tech Technology for paving & roads. Venus Buildtech India Pvt. Ltd., has now introduced the new Q-Tech technology with stabilizing cement for stabilization of soils for increasing CBR value which in turn reduces Plasticity Index(PI) by 35-40%. The CBR Value has shown increasing trend with the increase in stabilizer content, which can perform as a foundation layer for any level of road. Tests conducted after using the road material stabilizer, show that the CBR Value has increased 12 fold. Its feasibility for use in different layers of road pavements viz. sub grade, sub base and base courses has satisfied the UCS.

Q-Tech, remarkably quick and cost saving

Q-Tech Technology special stabilizer compound. A product patented worldwide and in India too. Used for improving bearing strength the compound also reduces maintenance of re-gravelling of roads. The Q-Tech process is a unique, environment friendly technological breakthrough in soil stabilization, waste binding and in Road design highways as RBI Grade-81. A product of Alchemist Technology, RBI Grade-81 has been well proven and reliable. RBI Grade 81 is a natural inorganic soil stabilizer which modifies the properties of soil to strengthen the same. It is patented worldwide including India. It creates strong, irreversible and impermeable layer resistant to adverse climatic conditions, from very high temperature to permafrost conditions and accommodating all types of roads and load requirements in a speedy way as per site conditions.

The advantage of RBI Grade 81

- Construction cost reduces by 10 30%
- Time reduces by 30 40%
- Drastically increases the strength
- Reduces transport & earth moving costs by about 60%
- Longer durability
- Reduces Maintenance cost

Environmental Benefits of using RBI 81

- Reduces leaching and contamination of ground water
- Reduces bitumen layers
- Reduces energy consumed in road construction
- Saves construction material like Aggregates and Good Soil

This stabilizer compound was originally developed by Road Building International for the South African Army in the beginning of 1990s for pavement engineering application. Alchemist Technology are manufactures and distributors for RBI Grade – 81 exclusive for India.





Delivering quality results in time-critical projects

Venus Buildtech India Pvt. Ltd., has constructed major roads for DMRC in the last one decade in Delhi. All the roads, main/service roads, were constructed with conventional technology. Now, in 2010 Venus Buildtech has used the stabilizer compound for the first time at the DMRC's Parking Areas at Jasola – Apollo Metro Station and Mohan Estate Metro Station(of 700 and 1300 square metres respectively.) The station Parking Areas were completed within 4 & 7 days respectively, by using 4% of stabilizer compound in sub grade stabilization and 6% in base course(aggregate stabilization) and tested for Density, which was found satisfactory by the engineers concerned.

Parking areas were opened to public for use and the surface showed good results. After testing, CBR Value was found to have increased 12 fold and Plasticity Index (PI) reduced 35-40% respectively. Results of compressive strength of base course after compaction were found excellent.

How the stabilizer compound works

It works by improving Road Layer which does not fulfil the specified functions anymore due to lower CBR and higher PI. It also improves quarried in-situ material along the road to be used to meet the specified parameters such as CBR and PI etc. in the construction of different pavement layers.





Q-Tech saves time and cost substantially

During the course of construction at Jasola – Apollo Metro Station recently executed by us with stabilizer and its cost was evaluated and was found saving of 33% on overall cost with introducing the new technology by launching RBI cement (as stabilizer) in soil and aggregate. Besides this the other benefits were, saving in time of construction period by twelve folds and reducing the section of road by over 60%.

Further cross section as being adopted generally in conventional method is 760 mm where as it can be reduced to 340 mm with the help of new technology viz using stabilizer (RBI – Cement 81) in soil, sub base and in base courses thus saving 420 mm in construction depth i.e. 55% and bituminous layers on top can be reduced considerably, thus saving Bituminous cost and reduces air pollution too.





Quality roads and pavements can be constructed in just 10 days !

Whereas in Conventional roads, multiple layers of stone, bricks and gravel are used and is time consuming whereas Road as per the new technology two to three stabilized layers are laid and tarmac can be placed over it, making it ideal for road construction work in minimum period of time, thereby saving time which is need of the hours for upcoming projects.

It would therefore be beneficial for colonizers, farmhouse owners, schools and Co-operative societies that their roads can be constructed in minimum period with the revolutionary Q-Tech technology as it results are remarkable, saving time/cost.



Venus Buildtech Pvt. Ltd., therefore stress upon all that Q-Tech can deliver quality results for any project big or small and can get their roads and pavements constructed within shortest period. This revolutionary stabilizing technology delivers measurable savings in time and cost for road construction/pavements for :

- Colonizers
- Farmhouse owners
- Schools / Colleges
- Apron / Taxiway builders
- Highway builders
- Parking
- Co-operative societies





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