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In Quest of Quality Concrete



RMC Plant Certification Scheme by QCI

Traditionally, construction involving concrete had been a labour-intensive activity in India. The demand for higher speed of construction, especially for residential and commercial housing, and infrastructure projects involving construction of flyovers, highways, roads, airports, etc. necessitated adoption of mechanized and semi-mechanized techniques of construction. The need for large volumes of concrete as well as faster speed of concrete construction was felt. This was conducive for the development of ready-mixed concrete (RMC) on commercial basis.

Use of batching and mixing plants for producing large volumes of concrete was in vogue in India for a long time. However, such use was minimal and restricted to construction of big jobs like hydroelectric projects, large industrial complexes, major bridges, etc. It was only since early 1990s that witnessed the beginning of commercial RMC industry in India.

The growth of RMC commenced with metropolitan cities, and then spread to other major cities. No authentic data is available on the RMC industry in India. However, it is believed that currently the industry has spread its wings to more than 100 cities of India. Major corporate-sector companies such as ACC Ltd. Ultratech Cement Ltd, Lafarge Aggregates & Concrete (P) Ltd., RMC Readymix (India) - Prism Cement Ltd., Godrej, etc have set up a large number of RMC plants in different cities. Again, no authentic data is available on the number of commercial plants in India;

PRESIDENT'S MESSAGE

Ready Mixed Concrete Manufacturers' Association (RMCMA) is pleased to publish the first issue of its Bulletin "QRating Concrete". The issue highlights the efforts made in evolving and implementing Quality Scheme for ready-mixed concrete in India—initially as a self-regulatory scheme by the RMCMA and then as an independent and upgraded third-party scheme by the Quality Council of India (QCI). Salient features of the upgraded quality scheme are also described.

By publishing these details we are hoping to satisfy the demand from consultants and specifiers for making available the list of QCI certified plants belonging to RMCMA member companies at one place. The list is provided city-wise and alphabetically for ease of use.

RMCMA is glad that the QCI Scheme is receiving wider acceptance — both from the government and the private sectors. The bulletin includes recommendations from Karnataka and Pondicherry PWDs, Bruhanmumbai Mahapalika, CIDCO, Navi Mumbai and also a number of consulting engineering firms across the country.

We are sure that the readers will find this bulletin informative and useful.

(Ravishankar M.)
President, RMCMA

however, the number is believed to be exceeding 1000. In addition equal number of plants (or even more) is being operated by construction companies in India for captive use.

QUALITY OF CONCRETE

Quality of concrete being produced and used in constructions - especially those involving use of primitive labour - intensive sitemixed concrete - has remained one of the major concerns of owners and specifiers. Unfortunately, till very recently, no established framework was available to ensure quality.

The Ready Mixed Concrete Manufacturers' Association (RMCMA) was the first to initiate efforts to evolve a framework for quality for ready mixed concrete. It was based on two strong pillars — best practices followed in advanced countries and adherence to provisions in the Indian standards — mainly IS 456 and IS 4926. Two Quality Manuals prepared by Experts Committee contain the details of the RMCMA Scheme^{1,2}. This plant audit-based scheme was launched in December 2008 and around 250 RMC facilities at 50-plus locations in India (mostly belonging to RMCMA member companies) were audited and certified by the RMCMA.

After operating this quality scheme successfully for nearly four years, RMCMA decided to raise the quality scheme to a higher pedestal. For this purpose, RMCMA signed a Memorandum of Understanding (MoU) with the Quality Council of India (QCI) — a non profit, national apex organization wedded to quality facilitation, accreditation and surveillance.

QCI SCHEME

QCI took the initiative of setting up three committees, namely, the Steering Committee, Technical Committee and Certification Committee. Experts from key organizations (see fig.1) from the government and private sectors and professional bodies were invited to be the members of these committees. The involvement of these organizations in the evolution of the scheme ensured that the ownership of the scheme is broad-based and views and concerns of major owners and specifiers in the country using large volumes of concrete are taken into account.



Fig 1 Three expert committees set up by QCI

The evolution of QCI scheme took more than one - and - a - half year. Following painstakingly prepared Scheme Manuals were finalized by the expert committees after long deliberations.

- Criteria for Production Control of Ready Mixed Concrete³
- Certification Process for Ready Mixed Concrete Production Control Scheme⁴
- Provisional Approval for Certifying Bodies for RMCPCS5.

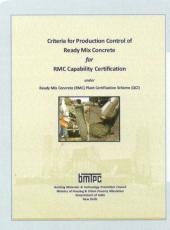
Multi Stakeholder Committees

- Central Government Ministries, e.g. Ministry of Housing & Urban Poverty Allevation, Ministry of Road Transport and Highways, MES, etc.
- Key Specifier: Central Public Works Department (CPWD)
- Central PSUs e.g. National Highway Authority of India, Airport Authority of India, RITES
- User bodies, e.g. Builders Association of India, Construction Federation of India.
- Professional bodies, e.g. Indian Concrete Institute (ICI), Association of Consulting Civil Engineers (ACCE), CREDAI.
- Manufacturers, e.g. Ready Mixed Concrete Manufacturers' Association (RMCMA), Cement Manufacturers' Association (CMA)
- Certifying bodies, e.g. Bureau Veritas Certification (I) Pvt Ltd., ICMQ India Pvt Ltd.

While formulating the scheme it was ensured that the QCI Scheme conforms to the requirements of the Bureau of Indian Standards (BIS), Indian Roads Congress (IRC), Indian Railway Standards (IRS), etc. The Scheme is also made applicable for:

- RMC plants supplying concrete commercially
- Plants supplying concrete for specific project (captive plants)
- Plants supplying concrete partly on commercial basis and partly for captive consumption.

Scheme excludes operations of placing, compaction, finishing and curing of concrete.



Criteria for Production Control of RMC



Certification Process for RMCPCS



Provisional
Approval for CBs
for RMCPCS

Fig 2 QCI Scheme Manuals prepared by multi-stakeholder Committees

The Scheme documents (Fig 2) are publically available and can be down-loaded from

http://qcin.org/CAS/RMCPC.

TWO OPTIONS

The QCI Scheme offers two options of certifications, namely,

- RMC Production Control Capability Certification
- RMC 9000 + Certification

RMC Capability Certification is the crux of the QCI Scheme. Comprehensive criterion has been developed by the Technical Committee which is documented under the Scheme Manual "Criteria for Production Control of Ready Mixed Concrete", published by BMTPC, Ministry of Housing & Urban Poverty Alleviation, Govt. of India³. Besides the audit of the plant and machinery and the control mechanism adopted by the producer, the criteria also embody laboratory testing facilities, technical skills of the human resources, the controls exercised on the quality of different concrete ingredients, mix design and the final product.

The production control criteria which can be considered to be heart of the scheme include the following six main features:

- I. Resource management: It covers three main areas, namely, plant, equipment and other utilities, laboratory and key personnel. Main areas under resource management are diagrammatically presented in Fig 4. Provision of basic laboratory testing facility is made mandatory under the QCI Scheme. The minimum testing equipment for the laboratory and the calibration frequency of the equipment are also specified. Compressive check list items have been developed so that an auditor is able to have an in-depth understanding of all key aspects of resource management having bearing on quality.
- Control on Quality of Incoming Materials: The ready mixed concrete producer needs to verify quality of all ingredients on a regular basis. Various standards of the BIS have specified the tests to be performed on different

ingredients and their frequencies of testing. The QCI scheme has made it mandatory to perform these tests at BIS specified frequencies. It is also specified that the physical and chemical properties of the basic ingredients should be tested in NABL-accredited laboratory, at least once in six months or when there is a change in the source of materials. Such rigorous testing regime would certainly ensure that ingredients having good quality are used in production of ready-mixed concrete.

- 3. Concrete Design: The QCI scheme requires that the ready-mixed concrete producer should have in-house capability to carry out mix proportioning. Plant personnel should also have the ability to carry out adjustments in the mix to cater to the variability in the incoming materials for example, the variations in the moisture contents in aggregates, grading, etc. The competence of the key personnel who carry out mix design will be judged by the auditors by going through the old records, interviewing some key personnel and witnessing few tests in the laboratory.
- 4. Production and Delivery: The auditor has been given the freedom to choose any five orders received by the producer during the past six months and verify from the autographic records as to whether the supplies have been made exactly as per the orders of the customers. Incidentally, the tests to be conducted and their frequencies in controlling the quality of the final product have also been specified in the QCI Scheme.
- Control on Process Control Equipment and Maintenance: Upkeep of plant and equipment, their calibration, etc. play an important role in determining the quality of the final concrete. The QCI scheme specifies the frequency of inspection, calibration tolerances, etc.

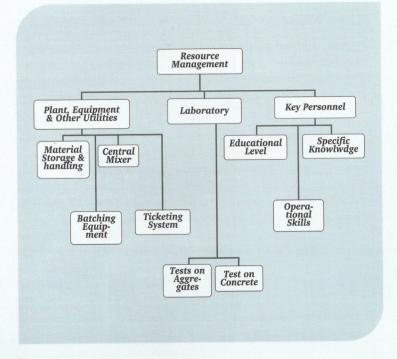


Fig 3. Resource management under production control criteria

6. Complaints and Feedback: The QCI Scheme has made it mandatory to have a Nodal Officer, who will be responsible for complaints and feedback. The scheme also highlights the importance of having established procedures to receive, resolve, review and find out the root causes of the complaints.

Certification Process

Detailed procedures for carrying out certification under the QCI Scheme have been evolved and are explained in the Certification Manual⁴. The broad aspects covered under the procedures are as below:

- 1. Application for certification: It includes application form, registration of applicant and the information to be furnished by the applicant to the certifying body.
- 2. Audit program: The audit program is divided into three stages viz. Stage 1, Stage 2 and Surveillance audits. While each plant needs to be audited under RMCPCS, the ISO 9001 audits can be carried out on sampling basis as allowed under ISO 9001 certification.
- 3. Audit man-days: Audit man-days under certification and surveillance audits for both schemes have been fixed by the Certification Committee.
- 4. Audit planning: This includes the information to be provided to the certifying body, constitution of audit team and audit plan.
- 5. Certification audit: It provides guidance on how RMC 9001+ QMS based certification and RMC capability certification audits should be performed. Safety measures to be adopted during the audit are also highlighted.
- 6. Non-conformities: Three types of Non Conformity (NC) have been specified, namely, Critical, Major and Minor. The detailed descriptions of each of the NCs and the time for closure have

- also been specified (see Table 1). The CBs need to send the audit report within 7 days from the date of the completion of the audit.
- 7. Certification decision: Certificate will be issued by the CB, only when all raised Ncs are closed (critical and major after on-site verification and minor after off-site verification).
- 8. Surveillance: Surveillance audits shall be carried out by the CB every six months, with at least one surprise audit in a year. The surprise audit will be conducted with a short notice of 3 days.
- 9. Complaints: This section covers the complaint handling process. The need to have a documented process to receive, evaluate and make decisions on complaints is highlighted. The CB should audit the complaints received by the plant from its customers. The manner in which a complaint received about a certified plant should be handled is described.
- 10. Certificate: The information to be included in the certificate as well as its validity are described.
- 11. Suspension and withdrawal of certificate: It provides detailed guidance when the certificate will be suspended and withdrawn and the suspension will be revoked.
- 12. Change of location/ownership/name: The certified plant needs to inform the CB changes in location, ownership and name of company. With the change in . location, audit of the new facility becomes essential. In case there is a change in the name of the company or its ownership, appropriate documents need to be submitted to the CB.
- 13. Fees: the fee structure of the CB shall be publically accessible and also provided on request.

Table 1: Non Conformities - Description, classification and time frame for closure

Non conformity	Description	Classification	Within 15 days. Corrective actions shall be submitted to CB within 10 days. Onsite verification to be undertaken within 5 days and decision taken either to close the NCs or suspend certification	
Critical	Non compliance with a requirement which indicates serious failure of the plant's capability to produce and deliver RMC to meet the customer requirements	Check List items: 3.2.1.1 Storage – Cement only 3.2.1.2 Batching and Mixing 3.3 Laboratory 5. Concrete Mix design 6. Production and delivery 6.1 Identification and traceability 7. Control of process control equipment and measurements		
Major	Non conformity regarding a Management system requirement which does not allow the production and delivery process to meet the customer requirements (applicable to ISO 900 I requirements only as defined by CB) or as given in the Criteria for the classification in column 3	3.2.1.1 Storage —other than cement 3.2.1.3 Delivery fleet 3.4 Key personnel 4. control of incoming materials 8. Complaints	Within I month. Evidences of closure shall be provided to the CB; verification to be done on site	
Minor	Non compliance with a requirement which does not compromise either the overall management system effectiveness or the production and delivery process	6.2 Control of non-conforming products 9. Feedback.	Within 3 months. Evidences of closure shall be provided to the CB; verification to be done in the following surveillance audit	

Approval System for Certification Bodies

The Certification Bodies (CBs) which would be auditing and certifying the ready-mixed concrete plants under the RMCPCS need to primarily comply with the requirements specified in ISO 17065 and additional requirements specified by the Quality Council of India. With a view to commence the operation of the scheme immediately, a Provisional System for Approval of the CBs was evolved, documented and approved by the Certification Committee⁵. Stringent requirements have been specified the committee for the CBs operating the scheme. The Minimum Competence Requirements of Auditors auditing the RMCPCS have been specified (see box). Further, the CBs will be subjected to a through yearly audit. They need to obtain accreditation from National Accreditation Board for Certification Bodies (NABCB) under the OCI.

Minimum Competence Requirement of Auditors

- Minimum Bachelor's degree in engineering in related field(s) with at least 5 years of relevant experience in RMC/Batching plant; or Diploma in engineering in related field(s) with 7 years of relevant working experience in RMC/batching Plants
- Experience in core technical processes like QA/QC or production and process control
- · Training and experience in auditing.

CONCLUSION

The QCI Quality Scheme provides a comprehensive framework of controlling quality of concrete from ready-mixed concrete plants. The Key Benefits of the Scheme to owners/specifiers, RMC producers, small customers and concrete industry are highlighted below.

Key Benefits of QCI Scheme

- For Owners and Specifiers (architects, consultants)
 - o Third-party quality assurance from an independent agency, based on well-defined quality norms evolved by experts
 - o Reliable Tool for short-listing of concrete producers

Key Benefits of QCI Scheme .. continued

- For RMC/Concrete Producers
 - o Competitive advantage over non-certified producers
 - o Top management gets audited data on their plants
- Small Customer (e.g. individual house builder)
 - o Assurance on QA&QC of concrete, without employing experts
- Concrete Industry
 - o Raise the industry standard and bring it on par with those from advanced countries.

EPILOGUE

The QCI Scheme is voluntary. However, looking at the advantages of the QCI Scheme, owners, specifiers, designers, etc. can make the scheme mandatory for jobs/projects undertaken by them. The scheme can also be used for short-listing of concrete supplier. Further, a six monthly third-party audit of the RMC facility provides crucial information to client/owner on actual performance.

Some government/semi-government organizations like the PWD-Pondicherry, Bruhan Mumbai Mahanagarpalika, Mumbai, CIDCO, Navi Mumbai, have already made the application of the Scheme mandatory for concretes procured for their projects (see enclosures). Also, leading consultants like STUP Consultants, Design Tree, etc. have made the QCI scheme mandatory for procuring concrete for their projects.

Current progress in certification of plants is enclosed in Annexure I.

REFERENCES

- Quality Manual Part I Check List for Certification of Ready Mixed Concrete Production Facilities, Ready Mixed Concrete Manufacturers' Association, India, 2008.
- 2. Quality Manual Part Il Guidelines on Quality Control and Quality Assurance of Ready Mixed Concrete, Ready Mixed Concrete Manufacturers' Association, India, 2008.
- Criteria for Production Control of Ready Mixed Concrete under Ready Mixed Concrete Plant certification Scheme (QCI), Building Materials & Technology Promotion Council, Ministry of Housing & Urban Poverty Alleviation, Government of India, New Delhi, 2013.
- 4. Ready Mixed Concrete Plant Certification Scheme (RMCPCS) Certification Process, Quality Council of India, New Delhi, 2013.
- 5. Ready Mixed Concrete Plant Certification Scheme (RMCPCS)

 —Provisional Approval System for Certification Bodies, Quality
 Council of India, New Delhi, 2013.



71	LAFARGE	Sanathal Ahmedabad: Plot no 14,15,16, B/H Sanghi Cement Down Sanathal Sarkhej, Ahmedabad, Gujarat
Ahmedabad	LAPARGE	Naroda, Ahmedabad : Plot No.41, Phase I, Naroda, G.I.D.C, Naroda, Opposite Mother way Bridge Ahmedabad - 380010
		Ahmedabad: Plot no. 803/E, Phase IV GIDC, B/h Indian Gum factory, Opp Jagdamba Ice factory Naroda ,Ahmedabad ,Gujarat
Ahmedabad	RMC	Plot no. I 40, Santej Vadsar Road, opposite Harihar Mahev Temple, Near Ramdev Masala, Village Santej, taluka Kalola Mashesanna
Ahmedabad	UltraTech	Plot No. :26, 27, 28 Uladiya Village Opposite Gokuldham, Sanad Road Near Sabar Poultry Farm , Ahmedabad, Gujarat
Alwar	UltraTech	A-783, Phase-II, RIICO Industrial Area, Bhmach Distt- Alwar, Alwar, Rajasthan
Amritsar	LAFARGE	Amritsar: Near Grewal Farm, Majitha Bye Pass Road, Amritsar - 143001, Punjab
		Sy No.48/I, Mysore Road, Kengeri Hobli, 3 Kumbalgodu Industrial Area Bangalore - 560074 Karnataka
		RMX Bommasandra Plant, 224/A, Bommasandra Industrial Area, 3rd Phase Hosur Main Road, Bangalore, Karnataka
Bangalore	ACC	RMX Yelahankha Plant, Survey No 66, Sonappanahalli, Bettahalasoor Yelahankha, Bangalore, Karnataka
		27a, 1st Phase Doddanekundi Village K. R. Puram, Bangalore - 560048, Karnataka
		PO Box No4843, Whitefield Road Area office ACC concrete, Hoody Village Bangalore-560048 I
Bangalore	(JM)	N0, 38-13, 3813-1 Doddenkundi Industrial Area, Phase-1 Mahadevpura Post Whitefield, Bangalore, Karnataka
		SY NO 63, Kadinahalli, Jala Hobli Bettahalsoor Post, Bengaluru (North)-562157 Karnataka
		Hegdenagar: Plot no 10, 11, 12, Thirumanahall Hegdenagar, Bangalore, Karnataka
		Sarjapur Plant: SY no 1/1, 2&3, Sampura Gate, Sarjapura 560099 Karnataka, Bangalore ,
Bangalore	LAFARGE	Anjanapura Plant: 32/01, Gollahaalli Villave, Anjanapura Post, Bangalore South Taluk Bangalore 560062 Karnataka
		143 C, Bommasandra Indl. Area Hosur Road Hebbagodi (Vill.) Anekal (TK) Bangalore 560099 Karnataka
		Whitefield: NO 20/A, Visveshwariah Industrial Area, Mahadevapira Bangalore 560048, Karnataka
		Plot No.31/B Veerasandra Industrial Area, Near Electronic City Phase 2, Anekal Taluk, Bengaluru -560107 Karnataka
Bangalore	RDC Concrete	Survey No. 27 P, Globe Phase I, Project at Sarjapur Outer Ring Road, Devarabeesanaha Ili Bengaluru - 560 103 ,
		Yelahanka I, Bangalore, Karnataka
		37/B, Doddanekkundi Industrial Area, I St Phase, Whitefield Road Bangalore - 560048 Karnataka
		Sy No. 149 / I, Kumbalagodu, Kengeri Hobli, Mysore Road, Bangalore - 560074 Karnataka
		Survey No 43/1, 64/65, NH07, Venkatala Village, Yelahanka, Bengaluru 560064, Karnataka
Bangalore	RMC	Mysore Road, Kumbalagodu No. 25B, Sy No.48,1st Phase Kombalagodu Industrial Area Bengaluru 560074 I, Karnataka
Dangalore		No.22 Doddanekkundi Industrial Area, Phase II, Mahadevpura Post, White Field Road Bengaluru 560048, Bangalore, Karnataka
		Survey NO.196/1 gand 183/4, Doddabommasandra Village,Sajapur,Hobli Anekal Bangalore
Bangalore	UltraTech	Sy.No. 95/1, Chambenahalli Village, Dommasandra Post, Sarjapur Hobli Aneka I Taluk, Bangalore, Karnataka
		Plot No.198-c, Sy. No.28, Bommasandra Village, Attibele Hoboli Anekal Taluk, Bangalore, Karnataka

Bangalore	UltraTech	S. No. 63, Kadiganahalli Village, Jala Hobli, Devanahalli Taluk, Yelhanka, Bangalore - 562 157	
Bhopal	UltraTech	Plot No109-111, Road No. 15, Sector-H Govindpura Industrial Area Bhopal - Madhya Pradesh - 462023	
		Mohali, Chandigarh: Plot No B-34, industrial Area, Phase- 3 Mohali - 160055	
Chandigarh	LAFARGE	Baddi (H.P): Vill: Malkumajra, The: Nalagarh, Distt: Solan L.L. Opposite Annapurna Hotel - 173205	
		Panchkula, Chandigarh: Plot no-101, Industrial Area Phase 1, Panchkula - 134113	
Channai	ACC	No 158-2A, Rajivgandhi Salai (OMR), Kazhipattur, Kelambakam Chennai - 603103 ,Tamil Nadu	
Chennai	AGG	No 50/51 (part), Poonamallee, Behind Balamurugan theatre, Seeneekuppam Chennai, Tamil Nadu	
Chennai	IJM	Road, Thiruvallur District, Poonamallee, Chennai - 600056 Tamil Nadu	
		Perungundi: No: 142, Developed Industrial Estate, Palavakkam Village, Perungudi, Chennai - 600096	
		Oragadam: Survey no. 630/2, Ezhichur Road, Panrutikandigai Village, Sriperumbudur (Taluk), Kanchipuram (Dist), Chennai - 631604	
Chennai	LAFARGE	Siruseri: No: 268/11, Next to Chettinad Silicon Factory, OMR Road, Kazhipattur Village, Kancheepuram Dist., Chennai - 603 103	
		Poonamallee: No.32/1, 32/2A, 32/2B, 33, and 46/3,Poonamalle Byepass Road, Poonamalle Village & Taluk, Thiruvallur District, Chennai - 600 056	
		Plot No.2/129, Avadi Road, Senneerkuppam Village, Poonamallee Taluk Chennai 600056, Tamil Nadu	
Chennai	RDC Concrete	Survey No. 45/ 4, Door No. 1/31, Vandalur Kelambakkam Road, Pudupakkam Village Chennai - 603 103, Tamil Nadu	
		Thirumudivakkam Plant: 26, SIDCO Industrial Estate, Thirumudivakkam, Chennai - 600044 Tamil Nadu	
Chennai	RMC	Poonamalee Plant: Plot no. 49, Survey no. 29/3c1 & 3 c2, Sennerkuppam, Poonamalee taluk Chennai - 600056 Tamil Nadu	
		Sirusri Survey No 110, Kazhipattur Village, Padur post, Chengalpet, Taluka Kanchipuram, Chennai, Tamil Nadu 603103	
Chennai	UltraTech	No 17, CMDA Industrial Area II, Maraimalainagar Industrial Estate, Maraimalainagar, Kancheepuram District, Chennai, 600044 Tamil Nadu	
Gileimai	WE MAKE GOOD CONCRETS SETTER	51 ⁻ , Nemeli Village, Survey No 116, Post Valarpuram, Taluka Kanchipuram, Chennai 602 105, Tamil Nadu	
Cochin	NEPTUNE READYMIX CONCRETE PVT LTD	Kochi Plant: plot no VI/58 & 59, Edayar Muppthadam PO Cochin Kerala, Cochin, Kerala	
Cochin	RMC	Kochi Plant: Sy no 67/3A23B, Edayar, Binanipuram PO - Kochi, Cochin, Kerala	
Coimbatore	LAFARGE	Coimbatore: SF No 481/2 Acchankulam Road, Mudalipalayam Pirivu, M.G. Pudur (PO), Coimbatore 641406	
Coimbatore	RMC	Coimbatore, Tamil Nadu	
Coimbatore	UltraTech	SF. NO. 506/A I , Sulur Railway feeder road, Kurumbapalayam, Muthugoundan pudur post Coimbatore-64 I 406	
Dadri	UltraTech	Plot No- 136, Near Krbl Rice Mill Vill-acheja, Dadri, District Gautam Budh Nagar 203207	
Dharwad	LAFARGE	Hubli: Plot no 2 Rayapur Industrial area, Dharwad - Dharwad 580025, Karnataka	
Ernakulam	UltraTech	VI/611 B, Industrial Development Area, Binanipurarn, Edayar Ernakulam-683502 1, Ernakulam, Kerala	
Faridabad	ACC	Faridabad : 20.4 Km, Sarai Khawaja Chowk, Amar Nagar, Delhi-Mathura Road, Faridabad, 121 001	
Faridabad	LAFARGE	Faridabad: 14/4. Mathura Road, Behind Anand Mehan Pipes, Faridabad, Haryana - 121003	

		Kundaim: Plot no A6/A7, Kundaim Industrial Estate, Kundaim Goa 403 115	
Goa	ACC	Nessai : Plot B3/B4 Margao Industrial Estate, Phase II Nessai, St Jude de Areal, Salcete Nessai, Goa	
GOa	AUU	Dargal: 35/1-B, Dhargal Tuem Road, Dhargal Pernem, Goa- 403 512, India	
Goa		Pilerne, Goa:No. 61A, Pilerne Industrial Estate, Pilernia Bardez, North Goa 403 511	
		Sancoale Vasco: Plot No 23/26, Chowgule Industries Plots, Zurinagar Sancoale, Goa, - 403 726	
Goa	UltraTech	"Plot No. 8 & 9. Sy No.137/1 Chowgule Industrial Estate, Sancoale Goa-403726"	
Guntur	UltraTech	Sy No 1/3 & 2/1p, Vaddeswaram (Village), Tadepalli (Mandal), Guntur District - 522502 Andhra Pradesh	
Gurgaon	ACC	Gurgaon: Khasra No 3/7/14/17 Kherkidaula, Gurgaon	
		Gurgaon, 38km Milestone, Behrampoor Road, Near Hero Honda Chowk,	
Gurgaon	LAFARGE	Khandsa, Gurgaon, Haryana 122001	
Gurgaon	RMC	VIII, Dhumaspur, PO Badshahpur, Sohna Road, Gurgaon, Haryana	
Hyderabad	ACC	Patencheru: Survey No 405/I, IDA, Patancheru, Medak District, Telangana 502 319	
		Plot No: 21, Woe, Batchupally(V), Qutubullapur(M) R.R. District - 500072, Hyderabad, Telangana	
Hyderabad	IJM	H-15, IDA, Uppal, Hyderabad - 500 039 Telangana, Hyderabad	
		Miyapur; Survey No 345, Bachupally, Miyapur, near Volvo Service Centre, Dist. Ranga Reddy, Hyderabad, Telangana 500054	
	Maraner.	Uppal : B12/4, IDA Uppal, Hyderabad, Telangana 500039	
Hyderabad	LAFARGE	Jeedimetla: Plot No 8&9, Phase IV, IDA, Jeedimetia, Hyderabad, Telangana 500055	
		Patencheru: Survey No 808, 811, 812, Plot No 108, Phase II, IDA, Patencheru, Medak Dist, 502319	
Hyderabad	RDC Concrete	Plot No.8/A, Survey No. 334 to 337, Sri Venkateshwara Ind. Co-op.Soc., I.D.A. Bachupally, R.R. District., Hyderabad, Telangana	
Hyderabad	RMC	Survey no.333, IDA Bollaram, Bachupally, R.R District, Hyderabad - 500 072, Telangana	
		Unit - 3, Sy No 334, Ida Bachupally Ranga Reddy District, Hyderabad - 500072	
Hyderabad	UltraTech ASA	SUN no.133/2, Kandlakoi Village, Medcha I Manda I, Hyderabad - 501401	
Tryderabad	WE WAKE GOOD CONCRETE SETTER	Sury no. A-14,15 &16, Road no 13, IDA Nacharam, Hyderabad, Telangana	
Indore	UltraTech	Survey No.: 370/1/5/2, Gram Plada, Palda Industrial Area, Nemawar Road Indore(M.P.) - 452001	
		Jhotwara: Plot No 24, Near Petrol pump, Niwaru Road, Jhotwara Industrial Area, Jaipur, Rajasthan 302 012	
Jaipur	LAFARGE	Sitapura: Plot No 782-783, VIII, Ramchandrapura, Goner Road, Near Mahatma Gandhi Hospital, Sitapura Ind Area, Jaipur, Rajasthan 302022	
Jaipur	RMC	Plot No.C, RIICO Industrial Area, Sitapur, Jaipur 302022, Rajasthan	
Kolhapur	UltraTech	Plot NO. A-19 shiroli MIDC Near Nh4, mayur phata, TalHatkanagale Dist Kolhapur 416 122, Maharashtra	
Kolkatta	ACC	JL-44 Langolpota (near 211 A Bus Stand). Bishnupur, P.S-Rajarhat. 24 Parganas(N), Kolkata-700135, West Bengal	
		Rajarhat Plant: Vill Kalaberia PO Wishnupur, PS Rajarhat N 24 Pgs 700135, Kolkatta, West Bengal	
	Manage .	Dankuni Kolkata, NH 6 Kona More, P.O.: Chamrail, PS: Rajarhat, Dist 24 Parganas (N), Kolkatta, West Bengal 700135	
Kolkatta	LAFARGE	Durgapur: G/14, Mauza Baktarnagar, J. L. Number 30, PS - Raniganj at Mangalpur Industrial Estate, Raniganj, West Bengal 713321	
Kolkatta	RMC	Baniara, Biprannapara Jalan Industrial Complex, Gate No. I , Vill. Baniara, Po-Begri, PS. Domjur, Howrah, Kolkatta, West Bengal	

	I When To a la	Harkhand Garhi, Gatta Sankhya 2301238, Lucknow - Raibareli Road,
Lucknow	CONCRETE SONO	Lucknow (U.P) - 226025, Uttar Pradesh
Ludhiana	LAFARGE	Ludhiana Airport Road, Near Zimidara Dhaba, Sahnewal, Ludhiyana, Punjab 141 120
Ludhiana	UltraTech	B-58 ,Phase-VII, Focal Point, Ludhiana (Punjab) PIN-141010, Punjab
Mangalore	RMC	Plant I and Plant 2 #38A, Bykampady Ind Area, Bykam pady Village, Mangalore, Taluk DK, Dist Mangalore 5750 I I
Mangalore	UltraTech	Plot No.1, 2, 3 & 4 A, Baikampady Industrial Area Baikampady, Mangalore, Karnataka
Mohali	ACC	Mohali Plant: B-34, Phase 3, Industrial area, 160055 Mohali Sasa Nagar, Mohali, Punjab
Mohali	RMC	Khata -17, Khatauni -74, Pandawala Road, Village Nimbuan Derabassi, Mohali, Punjab
Mohali	UltraTech	Plot No. B-33, Phase-3, Industrial Area Mohali-160059, Punjab.
Mumbai	ACC	Sion Plant: C.S. no 2 Camp, 2/2 Everard Nagar, Somaiya Campus, Sion (E) Mumbai 400022 Maharashtra
Mumbai		Ready Mix Concrete Plant, Plant-18, Gate No-7 Near Eastern Express Highway. Vikhroli Fe). Mumbai, Maharashtra
	Goorej	Ready Mix Concrete Plant at GIL Industrial Layout, Vikhroli (East), Mumbai-400079, Maharashtra India.
	0	Ready Mix Concrete Plant on LBS Road, Near Vikhroli Railway S, Mumbai, Maharashtra
		Chougle Compound, S. N. Dubey Road, Rawalpada, CTS No.2772 A Dahisar East, Mumbai, Maharashtra
Mumbai	LAFARGE	KURLA 2: CST No 127, LSB Road, Oppo Hotel Naaz, Kurla W, Mumbai, Maharashtra 400 070
Mumbai	RMC	Ghatkopar Plant: CTS No 172 LBS Marg - Ghatkopar (W), Mumbai, Maharashtra
		Plot no 13/65, near Deonar Police Station, Village Deonar, Govandi- West Mumbai - 400043, Mumbai, Maharashtra
Mumbai	UltraTech	UltraTech Cement Limited., C/O Neptune Realtors Pvt. Ltd, Off; LBS Road, Kamani-Kurla (west) Mumbai 400070. Maharashtra
Mysore	LAFARGE	Mysore Plant: No 43/5, Huyilalu Village, Yelwala Hobli, Mysore Dist 571130, Karnataka
Mysore	RMC	No.66A & 66B, Hootagalli Industrial Area, Mysore, 571186, Karnataka
Mysore	UltraTech	Plot No.89, Part 91 A, Belagola Industrial Area, KRS Road Metaga I li, Mysore, Karnataka
Nagpur	UltraTech	Muza Wanjara survey No. 31/1, Kamptee Road, Nagpur-440026, Maharashtra
Nashik	UltraTech	Plot No.C-27, MIDC, Satpur Near Jyoti Ceramic plant 2, Nashik - 422007, Maharashtra
Navi Mumbai	RMC	Mahape: Plot no A-411, TTC Industrial Area, Mahape, 400 701 Navi Mumbai, Maharashtra
		Plot no C-33, TTC Industrial area, MIDC Pawane, 1, Navi Mumbai, Maharashtra
Navi Mumbai	UltraTech	R/611-617, TTC Industira I area, Near Old Ashwini Quarry, MIDC Rabale Navi Mumbai-400 701, Maharashtra
NOIDA	LAFARGE	Noida: Plot No 85 to 90, Udyog Kendra, (toy city), Industrial Area, Greater Noida, Uttar Pradesh 201304
NOIDA	UltraTech	D - 18/3 site B , Surajpur Industrial area , Greater Noida - 201308, Uttar Pradesh
Panchkula	UltraTech	Plot No. 387, Phase-I, Industrial Area Panchkula, Haryana PIN 134113 1, Haryana
D	Comei	Gate No. 2527, Wagholi- Lohgaon Road, Wagholi, TalukaHaveli District Pune - 412207
Pune	grong	Ready Mix Concrete Plant, Plot No. 143/11, Lagadmala, Sinhagad Road Dhayari Pune - 411 041
Pune	RDC Concrete	Ramtekdi Industrial Estate, Survey No. 107, Plot No. 5, Hissa No. 2B Hadapsar Pune - 411 013, Maharashtra

Pune	RMC	Survey No-97/1, Plot No-123/124, Ramtekadi Industrial Area, Hadapsar Pune 411028 Survey No-218, Hissa No.03, Near TATA Technologies, Village - Hinjewadi Taluka- Mulshi, Pune, Maharashtra	
Pune	UltraTech	SR.NO. 34 Hissa TA/T, 2 Pune Sholapur Road. Phursungi Phata, Near Loni Kawdipat Toll Naka, Manjri (BK.) Hadapsar Pune 412307	
Raigad	UltraTech	Survey No: 129, 130/1, 130/2, Village Arivali Taluka Panvel, Raigad, Maharashtra	
Raipur	UltraTech	Survey No: 112, Kh. No.365/2, 365/4, 366 Pirda Road Village Serikhedi, Raipur, Chattisgarh	
Rajkot	LAFARGE	Haripar: Survey No 42/1, 2, Haripar(pal) Industrial Estate, Opp. Motel The Village Resort Kalawad Road Harpur, Rajkot, Gujarat Madhapur : No. 111/P, Plot No. 3, Jam Nagar Road, Madhapar Industrial Area Rajkot, Gujarat	
Rajkot	UltraTech	Survey No42-1/2, Kalavad Road, Opp. Motel the Village, Haripar - 360004 Tat- Kotda Sangani, Rajkot, Gujarat	
Sahibabad	ACC	38/1 A& B site IV Industrial Areea, Sahibabad - 201010 - UP	
Sahibabad	RMC	Plot No.B65, Site-4, Industrial Area, Sahibabad 201010 Uttar Pradesh	
Sonepat	ACC	Kundli Village: Nathupur, Kundli Sonipat, Haryana 131029	
Sonepat	LAFARGE	Sonepat: Gold Plus Road, Near Bharat Petroleum Pump, Bahalgarh, Sonepat, Haryana 131001	
Surat	LAFARGE	Icchapore - Plot No A-7/I , Ichchapore Bhatpor , G. I. D. C. Bhatpor, Taluka - Chorasi Dist Surat, Gujarat Bhestan/ Udhana: Plot NO E-1/II5, D-2/I-5, SY. NO. 2, B/H Bhagvati Ind. Estate Bhestan-Udhana Main Road TAL. Surat, Gujarat	
Surat	UltraTech	Magdalla Port, Dumas Road, Surat-395007, Gujarat	
		Plot No.: C-1 & C-2, Labdhi Industrial Park, Opposite Jain Temple, NH-8 Surat-395317, Gujarat	
Thane	Goorg	Chikhloli Village, Ambernath West, Ta I. Ambernath, District-Thane Maharashtra	
Thane	LAFARGE	Thane: Survey No 37, Hissa No 1, (PT), & 2, Vill. Bhayanderpada, opp Hotel Dwarka, Ghodbander Road Thane, Maharashtra 400104	
Thane	UltraTech	Address: Survey No.75 (Part) & 77, Hissa no-1 (Part), Near Phil's Company, Wahuli Village Nashik highway Tal-Bhivandi, Thane, Maharashtra	
Thrissur	NEPTUNE READYMIX CONCRETE PVT LTD	Trishur Plant: Avanoor P.O., Velakkode, Mundoor, Thrissur 680 541 Kerala	
Trivandrum	NEPTUNE READYMIX CONCRETE PVT LTD	Trivandum Plant: Sasthrattam - Arhoor Road - Mangalpuram P.O. Trivandrum Kerala	
Trivandrum	RMC	Surevy No 208/2, Mangalapuram Panchayath Thonnakkai, Sasthavattam PO, Trivandrum 695305, Kerala	
Tuticurin	LAFARGE	Tuticurin: Survey no 19-2B, Mela Arasaradi Village, Ottopidaram Taluka, Thoothukkudi District Tamil Nadu	
\	f	Atladara: Plot no 645, Next to Transpek Solox, Atladara - 390 012 Vadodara, Gujarat	
Vadodara	LAFARGE	Harni Vadodara: Plot no 688/2, Opp Darjipura, Air Force Station, Harni 390039 Vadodara, Gujarat	
Vapi	UltraTech	RMC Division, Plot No. 219, Nr. Morarji. Circle, Beside Ravi Transport GIDC Phase-II, Vapi, Gujarat	
Vizag	RMC	Plot No.A4, A.P.I.E, Autonagar, Gajuwaka, Visakhapatnam - 530 012, Andhra Pradesh	
	UltraTech -	Plant No. 1: Block A, I.Da, Mindi Village, Bhpv Post Gajuwaka, Vizag, Andhra Pradesh	
Vizag	VE MAKE GOOD CONCRETE METTER	Sury no. 581/1 & 58/6, Paradesipalem, Visakhapatnam - 530063, ANDHRA PRADESH	

BRIHANMUMBAI MAHANAGARPALIKA

Dy. Ch. Eng. / 2495 / Rds. / Plg. of 2 8 FEB 20:4

To, The CEO, NABCB Quality Council of India, 2nd floor, Institution of Engineers Building, Bahadur Shah Zafar Marg, New Delhi-110 002

Sub: Insistence of certification under the Quality Council of India (QCI) for RMC Plants registered/ renewed with MCGM situated at various locations for supply of RMC Mixes for Municipal Works.

Ref: 1. Your letter dtd.03.10.2013 addressed to Hon'ble Municipal

Commissioner

2. The sanction of Hon'ble Director (Engineering Services & Projects) of MCGM on 24.02.2014.

With reference to the your letter dtd.03.10.2013, addressed to Hon'ble Municipal Commissioner, wherein you have informed MCGM that QCI has launched the certification scheme for RMC Plants, & they have approved two certified bodies M/s. ICMQ Certification India Pvt. Ltd. and M/s. Bureau Veritas Certification (India) Pvt. Ltd. under the new Scheme for certifying RMC plants.

This is pleased to inform you that the Hon'ble Director (Engineering Services & Projects) of MCGM has accorded the sanction on 24.02.2014, for allowing the said two certified bodies and other agency as approved by QCI, for certifying the RMC plants for issuing the Accreditation certificate.

The Accreditation certificate from the two certified bodies M/s. ICMQ Certification India Pvt. Ltd. and M/s. Bureau Veritas Certification (India) Pvt. Ltd. and other agency as approved by QCI, under the new Scheme for certifying RMC plants will be made mandatory for the registration of RMC plant with MCGM for the period from 01.07.2014 onwards.

You are therefore requested to inform the two certified bodies M/ tification India Pvt. Ital and M/c Veritas Contis



CITY AND INDUSTRIAL DEVELOPMENT CORPORATION OF MAHARASHTRA LIMITED

PHONE : (Reception) +91-22-6650 0900 / 6650 0928 FAX : +91-22-2202 2509 / 6650 0933

Ref. No. CIDCO/EE (QC)/CBD/2014/957

Date: 12.05.2014

To, M/s. J. M. Mhatre Infra Pvt. Ltd. , Plot No. 492, Market Yard, Sahakar Nagar, Panvel, Dist. Raigad, Maharashtra - 410206.

Sub: Requirement of Certification under the Quality Council of India (QCI) for various RMC Plants registered with CIDCO.

This is to inform you that, CIDCO has decided to implement the newly launched scheme of the Quality Council of India (QCI) for certification of various RMC Plants situated within its jurisdiction.

As per this new scheme, it is mandatory for all RMC Plants to get registered with QCI, an autonomous body set up by Govt. of India to establish & operate national accreditation structure and assure quality in operation and processes of RMC

Accordingly, QCI has approved the following three no. of approved Certifying bodies under the scheme for Certifying RMC Plants.

M/s ICMQ Certification India Pvt. Ltd.

M/s Bureau Veritas Certification (India) Pvt. Ltd.

M/s Tata Projects Ltd.



No.3043 /PW/CE/EE[P]/AE[P]1/F.No.BES/2013-14/6 & ~ GOVERNMENT OF PUDUCHERRY **PUBLIC WORKS DEPARTMENT**

Puducherry, the 10/11/19 NOTE

Sub: PW - CE - Certification of Ready mix Concrete (RMC) Plants by Quality Council of India - Reg.

Ref: Lr. No: NIL, dated 10.10.2013.

The copy of the letter cited under reference received from the Joint Advisor, Quality Council of India, New Delhi is enclosed.

It is stated that Quality Council of India is the apex quality facilitation and accreditation body set up by the Government of India, which have launched "Ready mix concrete (RMC) Plant Certification Scheme" for certifying RMC plants. The scheme is designed to help users of various Government/ Semi Government institutions related to Constructional activities to assure themselves of the capability of the RMC plants to supply RMC of desired quality.

As such, the RMC plants located within the Union Territory of Puducherry may be intimated on this, for using the provisions to the exigency of public interest.

> (S. MANOHAR) CHIEF ENGINEE

Encl: As stated.

The Director, Department of Industries and Commerce, Puducherry
 The Chief Town Planner, Town & Country Planning Department, Puducherry

J 2 HON 3013

<u>Copy to:</u>
//hd Joint Advisor, QCI,
//hd Joint Advisor, QCI,
//of floor, institution of Engineers Building,
Bhadur Shah Zafar Marg,
New Delhi – 110 002
FAX: 011- 23378678

SI. No.	OVERNMENT OF KARNATIVAN OVERNMENT OF KARNATIVAN Description	Unit	Rate Rs. Ps.
4.47	Lift charges for steel of all diameters for additional floors over ground floor per floor height of 3.5 m. or part thereof cost of labour, complete as per specifications. Specification No. KBS	Tonne	445.00
4.48	Providing and laying cement concrete using 20 mm and down size grante coarse aggregates and fine aggregates of ready mixed concrete (RMC) M 20 for R.C.C. works laid in 15 cms thick tayers and well compacted withstring, curing, for raft foundation column footing, main and secondary beams with all lead and lifts etc., complete (exclusive of cost of sele and fabrication charges.)	cum	5,863.00
4.49	Providing and laying cement concrete using 20mm and down size granite coarse aggregates and fine aggregates of ready mixed concrete for RCC works laid in 15 cm thick layers and well compacted including vibrating curing etc., with all lead and lift etc., complete. (exculsive of cost of steel and fabrication charges)		
4,49.1	Ready mixed Cement concrete for Beams, Staircase and Roof with M-20	cum	5,863.00
4.49.2	Ready mixed Cement concrete for Beams, Staircase and Roof with M-25	cum	6,048.00
4,49.3	Ready mixed Cement concrete for Beams, Staircase and Roof with M-30	cum	6,227.00
4.49.4	Ready mixed Cement concrete for Beams, Staircase and Roof with M-35	cum	6,469.00
4.49.5	Ready mixed Cement concrete for Beams, Staircase and Roof with M-40	cum	6,711.00
	Note: The RMC should be obtained only from the plants certified by the quality council of India as per letter No. CE, C&B, AE-2, 2015-16 Dt. 02.09.2015		
4.50	Providing and mixing synthetic fibers 100% virgin triangular monofilament polyester fibers, 12mm in cut length for use as secondary fiber reinforcement in concrete works. Application per cubic meter shall be 125 grams per bag of cement or 0.25% by weight of cement.		
4.50.1	- do - For 1:2:4 Concrete	cum	310.00
4.50.2	- do - For M-20 Concrete	cum	400.00
4.51	Providing and mixing fibermesh MD(Multi Dimensional) Graded (libermesh inforce as) fibritised (inferconnected bundles of fibers that open up during the mix process) 100% wigin Polypropylene fibers contains no reprocessed elden materials and are specially manufactured with 25 individual unique fiber design to an optimum gradetion for use as complete secondary reinforcement. Application per cubic meter shall equal a minimum of 0.1% by volume (0.9kg per cubic meter) in the concrete. Fibermesh MD Graded Polypropylene fibrilated fiber should confirm to ASTM C 1116 type III 4.1.3 ASTM C 1116 performance level 19, ASTM C 1339 (Minimum average residual strength of 0.3 Mps).	cum	710.00
4.52	Providing and mixing libermesh stealth 43. Fibermesh 50 multi- dimansional graded multiflament 1005 veryin polypropylene fibres contained to reprocessed offrin materials and are specifically manufactured for use as concrete secondary reinforcement, Application per cubic meter shall be @ 0.9kg to 1.8kg per cum of concrete. Fibermesh steath 43 shall confirm to ASTM C 1116 type 111.4.108.	cum	410.00
4.53	Providing and casting reinforced cement concrete racks with design mix M20, granite or trap jelly 12mm and down size 5 cms thick and below	sqm	843.00

Consultants Recommend RMCPCS



A N Prakash Construction Project Management Consultants Pvt Ltd., Bangalore



Design Tree Service Consultants
Pvt Ltd. Bangalore



Consultants Consortium, Engineers & Architects, Bangalore



Stup Consultants Pvt Ltd., Bangalore



Dhrumataru Consultants, Hyderabad



N. K. Consultants, Hyderabad



Tandon Consultants
Pvt Ltd., New Delhi



Gautam & Gautam Associates, New Delhi



Continental Designers Project Consultants, Hyderabad



a.s.a. Consultants, Civil, Structural, Valuers, PMC, MEP, Hyderabad



K.C. Contech, Chennai



Engineering and Project Management Consultancy and Research Private Limited, Chennai



Innotech Engineering Consult Pvt Ltd, Bangalore

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