

DESIGN CRITERIA & PARAMETERS

1.1 Standards

Materials and workmanship shall comply with the relevant Indian Standards (with amendments) current on the date of submission of the tender.

Where the relevant standard provides for the furnishing of a certificate to CHIEF OFFICER, at his request, stating that the materials supplied comply in all respects with the standard, the Contractor shall obtain the certificate and forward it to CHIEF OFFICER.

The specifications, standards and codes listed below are considered to be part of this Bid specification. All standards, specifications, codes of practices referred to herein shall be the latest editions including all applicable official amendments and revisions.

In case of discrepancy between the Bid Specification and the Standards referred to herein, the Bid Specification shall govern.

a) Materials

IS : 269	Specification for 33 grade ordinary Portland cement
IS : 383	Specification for coarse and fine aggregates from Natural sources for concrete
IS : 455	Specification for Portland slag cement
IS : 458	Specification for precast concrete pipes(with and without reinforcement)
IS : 650	Specification for standard sand for testing of cement
IS : 808	Specification for dimensions for hot rolled steel beam, column, channel and angle sections
IS : 814	Specification for covered electrodes for manual metal arc welding of Carbon and Carbon Manganese steel
IS : 1003	Specification for timber paneled and glazed shutters(Parts 1 & 2)
IS : 1077	Specification for common burnt clay building bricks
IS : 1398	Specificationfor packing paper, water proof, bitumen laminated
IS: 1489	Specification for Portland pozzolana cement (Parts 1&2)
IS: 1566	Specification for hard drawn steel wire fabric for concrete reinforcement
IS: 1786	Specification for high strength deformed steel bars and wires for concrete reinforcement

- IS: 1852 Specification for rolling and cutting tolerances for hot rolled steel products
- IS: 1977 Specification for structural steel (ordinary quality)
- IS: 2062 Specification for steel for general structural purposes
- IS: 2185 Specification for concrete masonry units (Parts 1 & 2)
- IS: 2750 Specification for steel scaffoldings
- IS: 4990 Specification for plywood for concrete shuttering work
- IS: 8112 Specification for 43 grade ordinary Portland cement Ready mixed paint, brushing, bituminous, black, lead free,
- IS: 9862 acid, alkali, water and chlorine resisting
- IS: 10262 recommended guidelines for concrete mix design
- IS: 12269 Specification for 53 grade ordinary Portland cement
- IS: 12330 Specification for sulphate resisting Portland cement
- IS: 6925 and IS: 9103 Improve workability of concrete or extension of the setting time

b) Tests

- IS: 516 Method of test for strength of concrete
- IS: 1182 recommended practice for radiographic examination of fusion welded butt joints in steel plates
- IS: 1199 Methods of sampling and analysis of concrete
- IS: 2386 Methods of test for aggregates for concrete (Parts 1 to 8)
- IS: 2720 Methods of test for soils (Parts 1 to 39)
- IS: 3025 Methods for sampling and test (physical and chemical) for Water and wastewater (Parts 1 to 44)
- IS: 3613 Acceptance tests for wire flux combination for submerged arc welding
- IS: 4031 Methods of physical tests for hydraulic cement (Parts 1 to 15)
- IS: 7318 Approval tests for welders when welding procedure approval is not required (Parts 1 and 2)

c) Codes of Practice

- IS: 456 Code of practice for plain and reinforced concrete
- IS: 800 Code of practice for general construction in steel
- IS: 806 Code of practice for use of steel tubes in general building

construction

IS: 816	Code of practice for use of metal arc welding for general construction in mild steel
IS: 817	Code of practice for training and testing of metal arc welders
IS: 875	Code of practice for design loads (other than earthquake) for building structures (Parts 1 to 5)
IS: 1081	Code of practice for fixing and glazing of metal (steel and aluminum) doors, windows and ventilators
IS: 1477	Code of practice for painting of ferrous metals in buildings
IS: 1597	Code of practice for construction of stone masonry (Parts 1 &2)
IS: 1893	Criteria for earthquake resistant design of structures
IS: 2212	Code of practice for brickwork
IS: 2395	Code of practice for painting, concrete, masonry and plaster surfaces (Parts 1 & 2)
IS: 2502	Code of practice for bending and fixing of bars for concrete reinforcement
IS: 2571	Code of practice for laying in situ cement concrete flooring
IS: 2595	Code of practice for radiographic testing
IS: 2751	Recommended practice for welding of mild steel plain and deformed bars for reinforced construction
IS: 3558	Code of practice for use of immersion vibrators for consolidating concrete
IS: 3658	Code of practice for liquid penetrate flaw detection
IS: 3935	Code of practice for composite construction
IS: 4000	Code of practice for High strength bolts in steel structures
IS: 4014	Code of practice for steel tubular scaffolding (Parts 1 & 2)
IS: 4111	Code of practice for ancillary structures in sewerage system (Parts 1 to 4)
IS: 4326	Code of practice for Earthquake Resistant Design and Construction of Buildings
IS: 4353	Recommendations for submerged arc welding of mild steel and low alloy steels
IS: 5334	Code of practice for magnetic particle flaw detection of welds
IS: 5822	Code of practice for laying of welded steel pipes for water supply
IS: 7215	Tolerances for fabrication of steel structures

IS: 10005 SI units and recommendations for the use of their multiples and of certain other units

d) Construction Safety

IS : 3696 Safety code for scaffolds and ladder (Parts 1 & 2)

IS : 3764 Safety code for Excavation work

IS : 7205 Safety code for erection of structural steel work

1.2 Orientation

The works shall be laid out within the confines of the Site in order to interface to the existing infrastructure of roadways and inlet and outlet pipe work. Underground services requiring to be relocated in order to accommodate the proposed site layout shall, with the approval of CHIEF OFFICER, be relocated by the Contractor.

10. QUALITY CONTROL MANUAL FOR WORKS

GENERAL:

All materials to be used, all methods adopted and all works performed shall be strictly in accordance with requirements of these specifications. The Contractor shall set up a field laboratory at locations approved by the Engineer and equip the same with adequate equipment and personnel in order to carryout all required tests and Quality Control Work as per Specification and/ or as directed by the Engineer. The internal layout of the laboratory shall be as per relevant clause and/ or as directed by the Engineer. The list of equipment and the facilities to be provided shall be got approved from the Engineer in advance.

The contractor's laboratory should be manned by a qualified Materials Engineer/ Civil Engineer assisted by experienced technicians, and the set up should be got approved by the Engineer.

The Contractor shall carry out quality control tests on the materials and work to the frequency stipulated in subsequent paragraphs. In the absence of clear indications about method and or frequency of tests for any item, the instructions of the Engineer shall be followed.

For Satisfying himself about the quality of the materials and work, quality control tests will also be conducted by the Engineer(by himself, by his Quality Control Units or by any other agencies deemed fit by him), generally to the frequency set forth herein under. Additional tests may also be conducted where, in the opinion of the Engineer, need for such tests exist.

The Contractor shall provide necessary co-operation and assistance in obtaining the samples for tests and carrying out the field tests as required by the Engineer from time to time. This may include provision of labour, attendants, assistance in packing and dispatching and any other assistance considered necessary in connection with the tests.

The Contractor shall carry out modifications in the procedure of work, if found necessary, as directed by the Engineer during inspection. Works falling short of quality shall be rectified/ redone by the Contractor at his own cost, and defective work shall also be removed from the site of works by the Contractor at his own cost.

The Cost of laboratory building including service, essential supplies like water, electricity, sanitary services and their maintenance and cost of all equipment, tools, materials, labour and incidentals to perform tests and other operations of quality control according to the specification requirements shall be deemed to be incidental to the work and no extra payment shall be made for the same. If, however there is a separate item in the Bill of Quantities for setting up of a laboratory and installing testing equipment such work shall be paid for separately.

For testing of samples of soils/soil mixes, granular materials, and mixes, bituminous materials and mixes, aggregates, cores etc., samples in the

required quantity and form shall be supplied to the Engineer by the Contractor at his own cost. For cement, mild steel, and similar other materials where essential tests are to be carried out at the manufacture's plant or at laboratories other than the site laboratory, the cost of samples, sampling, testing and furnishing of test certificates shall be borne by the Contractor. He shall also furnish the test certificates to the Engineer.

For testing of cement concrete at site during construction arrangements for supply of samples, sampling, testing and supply of test results shall be made by the Contractor as per the frequency and number of test specified in the Hand book of Quality Control for Construction and relevant IS Codes or relevant clauses of these Specifications, the cost of which shall be borne by the contractor.

The method of sampling and testing of material shall be as required by the "Handbook of Quality Control for Construction and IS specifications. Where they are contradicting, the provision in these specifications shall be followed. Where they are silent, sound engineering practices shall be adopted. The sampling and testing procedure to be used shall be as approved by the Engineer and his decision shall be final and binding on the Contractor.

The various materials for construction shall be got approved from the Engineer. The responsibility for arranging and obtaining the land for borrowing or exploitation in any other way shall rest with the Contractor who shall ensure smooth and uninterrupted supply of materials in the required quantity during the construction period.

Responsibility for arranging uninterrupted supply of materials from the source shall be that of the Contractor.

Defective Materials:

All materials which the Engineer/ his representative have determined as not confirming to the requirements of the Contract shall be rejected whether in place or not; they shall be removed immediately from the site as directed. Materials, which have been subsequently corrected, shall not be used in the work unless approval is accorded in writing by the Engineer. Upon failure of the Contractor to comply with any order of the Engineer/ his representative given under this clause, the Engineer his representative shall have authority to cause the removal of rejected material and to deduct the removal cost thereof from any payments due to the Contractor.

Imported Materials:

At the time of submission of tenders, the Contractor shall furnish a list of materials/finished products manufactured, produced or fabricated outside India which he proposes to uses in the work. The Contractor shall not be entitled to extension of time for acts or events occurring outside India and it shall be the Contractor's responsibility to make timely delivery to the job site of all such materials obtained from outside India.

The materials imported from outside India shall conform to the relevant Specifications of the Contract. In case where materials/ finished products are not covered by the Specifications in the Contract, the details of Specifications proposed to be followed and the testing procedure as well as laboratories/establishments where tests are to be carried out shall be specifically brought out and agreed to in the Contract.

Signature of contractor

Date:-

Place:-

**CHIEF OFFICER
UNA NAGARPALIKA
UNA**

PREAMBLE

01. All items of work under the contract shall be executed strictly in accordance with the description of the item in the Schedule, relevant drawings and specifications read in conjunction with the appropriate, General Technical Specifications for Building work by Indian Standard Specification and Condition of Contract.
02. The rate for item of work included in the Schedule shall unless expressly stated otherwise, include all materials, labor, fixing, materials, accessories, devices, operations, appliances, tools, plant, equipment, transport and incidents required in preparation for and in the full and entire execution, completion, testing and commissioning of the work called any materials, appliances, specification and drawings completely. This shall be also include any materials, appliances, equipment and incidentals work not specifically mention herein or noted on the drawings / documents as being furnished or installed but which are necessary and customary to make the installation complete and in satisfactory working order. The description for the items in the schedule shall unless otherwise stated be held to include waste on materials, carriage and cartage, carrying in hosting, setting, fitting and fixing in position, disposal of debris and all other labors necessary in any for the full and entire execution and completion aforesaid in accordance with good practice and recognized principles.
03. The total quantities included in the final measurement of each item shall be measured the nearest integer relative to that item, or to one decimal place if so indicated for only specified items in Drawings and elsewhere in Tender Document.
04. The contractor shall be paid for the actual quantities of work executed by him in accordance with the drawings at the contractor rate for only specified items as per drawings and elsewhere in Tender Document.
05. The quantities are not given in the schedule. The owner reserve the right to increase or decreased the quantities of work or to totally omit any items of work or new items to be introduced and the contractor shall not be entitled to claim any extra or damages on these grounds.
06. No alteration what so ever is to be made to the text or quantities of the Schedule unless such alteration this authorized in writing by the Una Nagarpalika. Any such alternations, notes or additions shall unless authorized in writing be disregarded when tender documents are considered.
07. All error in totaling in the amount column and in carrying forward totals shall be corrected.

08. Unless otherwise stated all measurement shall be taken in accordance with Indian Standard of Building and Civil Engineering Works IS 1800 - 1969 - 1975 & all revisions thereafter.

Signature of contractor

Date:-

Place:-

**CHIEF OFFICER
UNA NAGARPALIKA
UNA**

TESTING OF MATERIALS & CONCRETE WORKS:

All the material and Item tests should be taken as per R&B Norms / MOST / MoRT&H norms

SCHEDULE FOR TESTING OF MATERIALS					
For ensuring quality control and workmanship, various tests prescribed below for materials shall be taken at periodical intervals as stipulated below.					
The materials shall be a got tested at Government Laboratory (R & B) or field Laboratory of GERI (R & B) for which 1% of the estimated amount put to Tender shall be recovered from the contractor from the R.A. bills and final bills at the testing charges shall be paid to the GERI by the Government. However if the charges increase over 1% no excess recovery shall be made from the contractor as per resolution of B & C Department dated 10th, May 1985 vide TNC/1085 (4)s.					

Item No. as per Sched ule 'B'	Brief Description of materials to be tested	Qty. of Materials	Prescription of test which shall be carried out	Frequency @ which test shall be carried out		Total Nos of test to be taken
1	2	3	4	5		6
	Bricks		*Water absorption	1 test @ 50,000 Bricks		
			*Efflorence			
			Size			
			*Strength Comprehensive			
	Cement	MT	*Consistency	1 test @ 50.0 M.T. 100 T 2 tests,		8
			*Setting time	200 T 3 tests, 300 T 4 tests, 500 T 5 tests,		
			*Compressive Strength.	800 T 6 tests, 1300 T 7 tests & 8 tested for large consignment.		
	Steel	HYSD	*Tensile, (TMT)	As per Manual of Quality Control		
			Yield	1 test/40 tones / per category		
			*Elongation			
			Size			1
	C.C. Cube Test 1:2:4		*Compressive Strength.	1 to 5 cum -	1 No	
	M 100			6 to 15 cum -	2 No	5
	M150			16 to 20 cum -	3 No	14
	M250			20 to 50 cum -	4 No	28
	M300			51 to above - 4 + 1 additional sample for		30
	M350			each 50 cum or part thereof.		26

The contractor shall have to pay 1% of the estimate cost put to tender towards all testing of materials & the same shall be deducted from their bills for the work. The testing of various materials shall be carried out in GERI and result received shall be binding to all i.e. the contractor and Government.

Testing charges of GERI shall be borne by Govt. No refund be made not extra charges over 1% shall be recoverable from the contractor.

Signature of contractor

Place

Date

**CHIEF OFFICER
UNA NAGARPALIKA
UNA, DIST: UNA**

UNA NAGARPALIKA

માલ સામાનના પરીક્ષણ અંગેના ટેસ્ટની સંખ્યા અને સ્વીકૃતીના ધોરણો દર્શાવતું પત્રક

ગુણવત્તા નિયમન માર્ગ અને મકાન વિભાગ

ક્રમાંક	ટેસ્ટની વિગત	ટેસ્ટના ધોરણો	પરીણામોની સ્વીકૃતીના ધોરણો
૧.	૨.	૩.	૪.
૦૧.	સીમેન્ટ		
	(ક) સેટીંગ ટાઈમ - ઈનીશીયલ - ફાઈનલ	૫૦ ટનના ૨ ટકા થેલીઓમાંથી ૧૫ કિલોની એક સેમ્પલ લેવાનો રહે છે. ૫૦ થી ૧૦૦ ટન - ૨ સેમ્પલ ૧૦૦ થી ૨૦૦ ટન - ૩ સેમ્પલ ૨૦૦ થી ૩૦૦ ટન - ૪ સેમ્પલ ૩૦૦ થી ૫૦૦ ટન - ૫ સેમ્પલ ૫૦૦ થી ૮૦૦ ટન - ૬ સેમ્પલ ૮૧૦ થી ૧૩૦૦ ટન - ૭ સેમ્પલ	૩૦ મીનીટ કરતાં ઓછું નહીં. ૬૦૦ મીનીટો કરતાં વધારે નહીં.
	(ખ) ફાઈનનેશ (સીવાવી)	પાંચ સેમ્પલ માંથી એક ટેસ્ટ (એલ. લીવ ૯૦ માઈક્રોન)	૦ માઈક્રોનની સીવમાંથી ૮૦% ગર વધુ પસાર થવું જોઈએ.
	(ગ) કન્સીસ્ટેન્ટી ટેસ્ટ	એક સેમ્પલ (દરેક સેમ્પલ ઉપર મુજબ) ત્રીજા દિવસે ઓ.પો.સી. માટે ૧૬૦ કિ.ગ્રા. સે.મી. સાતમા દિવસે ઓ.પી.સી. માટે ૨૨૭ કિ.ગ્રા. સે.મી. ૨૮ દિવસે ઓ.પી.સી. માટે ૩૧ કિ.ગ્રા. સે.મી.	૪૩૨ જેટલું દરેક સેમ્પલ ઉપર મુજબ

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	(ચ) ફાઈનલેશ ટેસ્ટ સ્પેશીફીક સરફેસ દ્વારા	ઓ.પી.સી. માટે ૨૩૫ સે.મી. / ગ્રામ વધારે પી.પી.સી. માટે ૩૦૦૦ સે.મી. / ગ્રામ	ઉપર મુજબના પાંચ સેમ્પલમાંથીએક ટેસ્ટ
	(છ) રાસાયણીક પૃથક્કરણ આઈ.એ સ. ૪૦૩૨-૯૬૮	૧. મેગ્નેશીયમ ઓક્સાઈડ ૬ % થી ઓછું. ૨. સલ્ફર ટ્રાય ઓક્સાઈડ ૨ .૭૫% થી ઓછું. ૩. ઈગ્નીશન સોસા ૫%સુધી.	ઉપર મુજબના પાંચ સેમ્પલમાંથીએક ટેસ્ટ
૦૨.	રેતી		
	(અ) સીલ્ડ કંટેડ	૧૫૦ ઘન મીટર એક ટેસ્ટ (એક સેમ્પલ ૧૦ કિ.ગ્રા.)	૩% સુધી
	(બ) ફાઈનલેશ મોડ્યુલસ	-૦૦૦૦-	સ્પેશીફીકેશન નિયત કરેલા ઘોરણ મુજબ સામાન્ય રીતે ઓછાગો નમાં આવતી રેતી વાપરવી નહીં.
૦ ૩. (અ)	ગ્રીટ કપચી (ભિલ્ડીંગ કા મ માટે) (ક) ગ્રેડેશન ટેસ્ટ (ખ) ઈમ્પેક્ટ ટેસ્ટ (ગ) એબ્રેશન ટેસ્ટ (ઘ) સાઉન્ડનેશ ટેસ્ટ	પ્રતિ ૫૦ ઘનમીટરે એક ટેસ્ટ પ્રતિ સીઝન બે ટેસ્ટ પ્રતિ સીઝન બે ટેસ્ટ પ્રતિ સીઝન બે ટેસ્ટ પ્રતિ સીઝન બે ટેસ્ટ	ડિઝાઈન એસ. ૧૮૩ ૧૯૭૦ ના ધો રણો મુજબ ૦૦૦૦૦૦ ઓવરલેઈડ આઈ. એ સ. ૧૮.૫ ૧૯૭૨ ૩૦% ૪૫% " ૩૦% ૪૫% " લોસ વીથ લોશવીથ "

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૦૪.	ઇટો		
	(ક) એકલોરેસમેન્ટ ટેસ્ટ (ખ) વોટર એબસોર્બેશન ટેસ્ટ (ગ) કોમ્પેસીવ સ્ટ્રેગ્થ ટેસ્ટ	૨૦૦૦ ઇટોના જથ્થામાંથી ૨૦ ઇટો લેવાની રહેશે. ૩૫૦૦ ઇટોના જથ્થામાંથી ૩૨ ઇ ટો લેવાની રહેશે અને દરેક ૫૦૦૦૦ ઇટોના જથ્થામાંથી ૫૦ ઇટો લેવાની રહેશે.	મોડરેટ ૨૦% થી વધુ નહીં એવરેજ ૩૫ કિ.ગ્રા. / સે.મી. થીઓ છું નહીં અને દરેક રીમલ્ટ નિયત ધોરણના ૨૦ %થી ઓછું ન હોવું જોઈએ.
૦૫.	પાણી		
	કેમિકલ એનાલીસીસ	એક સોર્સ માટે એકજ વખત ટેસ્ટ લેવાનો રહેશે પછી જો શંકા થાય તો જ	ટીડીએસ (મી.ગ્રા. લીટર-૩૦૦૦) સલ્ફેટ (મી.ગ્રા.લીટર- ૫૦૦) કલોરાઇઝ્ડ મી.ગ્રા. / લીટર -૨૦૦૦ (પી.સી. સી.) ૧૦૦૦ (આર.સી.સી.) કાર્બનીક પદાર્થ - ૨૦૦ અકાર્બનીક પદાર્થ - ૩૦૦૦

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૦૬.	સીમેન્ટ કોકીટના ડા ટેસ્ટ કચુ	<p>અ) ઓર્ડીનરી એન્ડ કન્ટ્રોલકોક ૧૮ માટે આઈ.એસ. ૪૫-૧૯૭૮ જથ્થો</p> <p>સેમ્પલ ની સંખ્યા</p> <p>૧ થી ૫ ઘનમીટર ૧</p> <p>૬ થી ૧૫ ઘનમીટર ૨</p> <p>૧૬ થી ૨૦ ઘનમીટર ૩</p> <p>૩૧ થી ૫૦ ઘનમીટર ૪</p> <p>૫૧ થી ઉપરના ૪ + દરેક જથ્થામાં કેડ ૫૦ ઘ.મી. (૧ સેમ્પલ - ૬ કચુબ)</p> <p>(બ) ઓર્ડીનરી અને કન્ટ્રોલકોક ૧૮ પુલોના કામ માટે આઈ.આર. સી. ૨-૧૯૬૬ મુજબ. પ્રતિ ૫૦ ઘનમીટરના જથ્થા માટે ૧૦ કચુબ લેવાના જે પૈકી ૫ કચુબ ૭ દિવસના અંતે અને ૫ કચુબ ૨૮ દિવસના અંતે ટેસ્ટ કરાવવાના રહે છે. કોકીટ કામ દરમિયાન રહેતા દિવસ માટે કાયમ ઉપર મુજબ કચુબ લેવાની અને ત્યારે પછી ત્રણ દિવસે એકવાર કચુબ ભરવાના રહે છે. (ક) સીમેન્ટ કોકીટ બીમના કામ માટે પ્રતિ ૩૦ ઘન મીટરના જથ્થા માટે ૫૦ કચુબ ભરવાના જ પૈકી ૫ કચુબ ૭ દિવસ અને બાકીના ૫ કચુબ ૨૦ દિવસે ટેસ્ટ કરાવવાના રહેશે.</p>	<p>(બ) જુદા જુદા ગોડના કો કીટ માટે નિયત કરેલા મજબુતાઈ મેળવવી જરૂરી છે.</p> <p>૭ દિવસ ૨૮ દિવસએમ. ૧૦૦ ૭૦ કિ.ગ્રા. ૧૦૦ કિ.ગ્રા.</p> <p>સે.મી. સે.મી.</p> <p>એમ. ૧૫૦ ૧૦૫ કિ.ગ્રા. ૧૫૦ કિ.ગ્રા.</p> <p>સે.મી. સે.મી.એમ. ૨૦૦ ૧૩૫ કિ.ગ્રા. ૨૦૦ કિ.ગ્રા.</p> <p>સે.મી. સે.મી.</p> <p>એમ. ૨૫૦ ૧૭૦ કિ.ગ્રા. ૨૫૦ કિ.ગ્રા.</p> <p>સે.મી. સે.મી.</p> <p>આ ઉપરાંત આઈ.એસ. ૪૫૬-૧૯૭૮ ના કોડ મુજબ વિશિષ્ટ મજબુતાઈ (કેરેક્ટરી સ્ટીક સ્ટ્રેન્થ) પણ ગણતરી કરીને મેળવવાની હોય છે.</p> <p>(બ) દરરોજ ટેસ્ટ કરેલા કચુબની સરેરાશ કોમ્પ્રેસીવ સ્ટ્રેન્થ નિયત ધોરણોથી ઓછી ના હોવી જોઈએ. દરરોજ ટેસ્ટ કરેલ કચુબ ના ૨૦% કચુબની સ્ટ્રેન્થ નિયત ધોરણની સ્ટ્રેન્થ થી ૮૫% ઓછી ના હોવી જોઈએ.</p>

૧.	૨.	૩.	૪.
૦૭.	લોખંડ		
	(ક) માઈલ્ડ સ્ટીલ બાર (આ ર.સી.સી.)	૪૦ ટને ઓછામાં ઓછો એક ટેસ્ટ લેવાનો રહેશે.	ધન મી.મી. અલ્ટીમેટ સાઈઝ ઈ મોમેશન ટેન્સાઈલ કિ.ગ્રા. ના ટકા સ્ટ્રેન્થ (કિ.ગ્રા. / સે.મી.) ૦-૨૦ ૪૨ ૨૬ ૨૩ ૨૦-૪૦ ૪૨ ૨૪ ૨૩ ૪૦ થી વધુ ૪૨ ૨૪ ૨૩ બધી સાઈઝ ૪૯.૫ ૫૨.૫ ૧૪.૫ ૮.૦૦ ૧૪.૦૦ આવેલ ૪થો ૭.૦૦ ૧૫૦ ટેન્સાઈલ ૪થો ૫.૦૦ ૧૬૦ સ્ટેમ્પથી ૪૨૦૦ મીમી ૪.૦૦ ૧૭૫ ઓછામાં ૩ ૩.૦૦ ૧૯૦ ઓછું ૨.૫ ૮૫% સ્પેશીફિકેશનના આઈ.એસ. કોડના નિયત કરેલ મોરમ.
	(ખ) ટવીસ્ટેડ સ્ટી બાર (ગ) પ્રિન્ટેડ કોકીટ માટે સ્ટી લના તાર	૪૦ ટને ઓછામાંઓછો એક ટેસ્ટ લેવાનો રહેશે.	

નોંધ :

સરકારશ્રીનાં પરિપત્ર ક્રમાંક : એસએસઆર/૧૦૯૨/આઈબી/૧૨૯-૧૦સ તા. ૨૪-૧૦-૧૯૯૪ અન્વયેનું પરિશિષ્ટ અન્વયે વખતો વખતનાં ફેરફારો ટેન્ડરને બંધનકર્તા રહેશે.

Signature of contractor

Place:-

Date :-

**CHIEF OFFICER
UNA NAGARPALIKA
UNA**