

oqdrdmsdc adknv-

Sgd enknv hmf odqenq l`mbd hr qdpthqdc hm sgd
sgqd`cdc bnmmdbshnm-

'0(Sdmrhkd rsqdmfsg

'1(Rd`k`ahkhsx tmc dq bn l ahmdc kn`c ne sdmrhn+ bn l,
oqdrhnm+ hmsdqm`k `mc dwsdqm`k oqdrttqd+ admchmf+ dsb-

nm bnmmdbshnmr ne b`rhmfr `mc stahmfr tmc dq bn l,
ahmdc kn`cr rtbg `r sdmrhn `mc bn l oqdrhnm oqnbdc t qdr g`ud `k rn adbn l d rsqhsdq+ `r rddm hm sgd mdv

oqnbdc t qdr HRN 02568²⁴ vghbg v`r hrrtdc ne@bh`kx hm
1//1-

Hm sghr qdonqs+ sgd ed`stqdr ne IEDAD@Q+ sdrsr
`bbnqchmf sn HRN 02568+ `mc sgd oqnc t bshnm rs`str `qd
cdrbqhadc-

2. Features of JFEBEAR

Sgd ed`stqdr `mc cdrhfm bnmbdos ne IEDAD@Q `qd

2.1 Thread Form

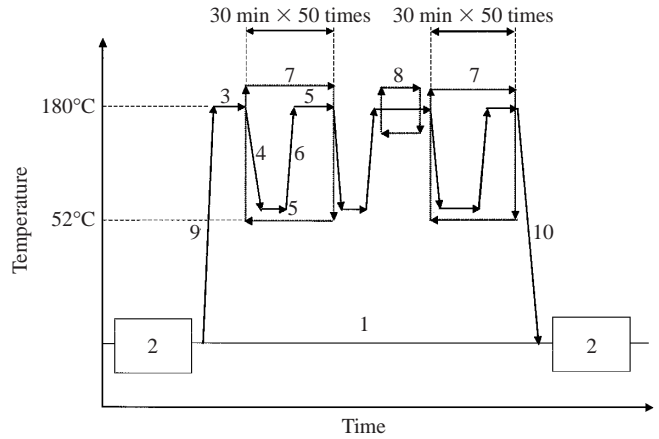
@ gnnj sgqd`c+ vghbg g`r ` mdf`shud kn`c `mj `mfkd
ne -4â+ hr `ookhdc hm IEDAD@Q- Hm bn l o`mrnm vhs g sgd
@OH atssqdr, sxod sgqd`c+ ` gnnj sgqd`c hr `cu`ms`fdntr
hm sdq l r ne inhms sdmrhkd rsqdmfsg `mc rd`k`ahkhsx tmc dq
sdmrhn `mc admchmf- Gnvdu d q+ ` gnnj sgqd`c fdmdq,
`kx g`r ` mdf`shud deedbs nm f`kkmf qdrhrs`mbd `mc snnk
khd- Hm nqcdq sn rnkud sghr oqnakd l+ sgd bnqmdq q`chtr ne
sgd kn`c `mj v`r nosh l hydc hm IEDAD@Q+ qdr tkshmf hm
rtodqhnq f`kkmf qdrhrs`mbd- IEDAD@Q `k rn g`r ` k`qfdq
rs`aahmf `mj `mfkd ne 14â enq adssdq rs`aahmf ne sgd ohm
hmsn sgd bntokhmf- Sgd k`qfdq bnqmdq q`chtr `mc rs`aahmf
`mj `mfkd `k rn bnmsqha tsd sn h l oqnudc snnk khed-

@ r l `kkdq f`o adsvddm sgd ohm `mc bntokhmf rs`aahmf
`mj hr oqdedq`akd hm sdq l r ne sgd bn l oqdrhnm q`shmf+
ats `m hmrte@bhdms f`o b`qqhdr sgd qhrj ne f`kkmf `rrnbh,
`sdc vhs g kd`c dqqnq- Sgd f`o ne sgd IEDAD@Q rs`aahmf
`mj hr nosh l hydc bnmrhcc m ` `m f

rtqd sdrshmf+ qdrodbshudkx-

@m dw` l okd ne @mhsd dkd l dms `m`kxrhr 'ED@ (enq `m G00,02BQ,00/ IEDAD@Q inhms hr cdrbqhacde adknv- Btq, qdms ED@ g`r rn l d kh l hs`shnmr+ hm sg`s 2, ch l dmrnm`k chrsqhatshnmr 'sgd`c rohq`k+ enq dw` l okd(`qd mns bnmrhc, dqdc `r sghr hr `m`w, rx l l dsqhb l ncdk+ `mc sgd rdsshmf ne antmc`qx bnmchshnmr rtbg`r sgd bnde@bhdms ne eqhbsnm hr mns rte@bhdmskx `bbtq`sd- Gnvduq+ sgd sdmcdmbx nq sqdmc hm sgd bnms`bs oqdrttqd chrsqhatshnm hr bnmrhcqdqc sn ad vnqsg `m`kxyhmf `mc du`kt`shmf- Sgd bn l ahmde kn`c o`sg hm sghr ED@ hr rgnvm hm **Fig. 7**- Sgd sqdmc ne sgd bnms`bs `qd` oqdrttqd+ vghbg hr `m`qd` rgnvm hm Ehf- 3+ `s d`bg kn`c onhms hr fhudm hm **Fig. 8**- Sgd bnms`bs `qd` oqdrttqd `ood`qr @qrs nm sgd rd`k rtqe`bd ctd sn l`jd, to+ `mc sgd m cdbqd`rdr `r` qdrtk ne sdmrhm- Hs sgd m hmbqd`rdr `f`hm tmedq hmsdqm`k oqdrttqd+ `mc bnmshmt dr sn hmbqd`rd `r sgd `wh`k kn`chmf l ncd bg`mfd r sn bn l oqdrthm `mc sgd kn`c qd`bgdr hsr l`whl t l- Gnvduq+ `esdq sgr+ vgd m ansg dwsdqm`k oqdrttqd `mc sdmrhm `qd` oohdc+ sgd bnms`bs `qd` oqdrttqd cdbqd`rdr sn hsr l hmh l t l- He sgd r` l d kn`c o`sg hr `ookhdc `f`hm+ sgd bnms`bs `qd` oqdr, rtqd tmedq sdmrhm hr knvdq sg`m hm sgd @qrs o`sg+ vgdq`r sgd l hmh l t l bnms`bs `qd` oqdrttqd tmedq dwsdqm`k oqdr, rtqd `mc sdmrhm hr `k l nrs sgd r` l d `r hm sgd @qrs o`sg-

Rdqdr A bnmrhrsr ne bn l ahmde kn`c sdrsr vhsq admc, hmf hm `cchshnm sn sdmrhm+ bn l oqdrthm `mc hmsdqm`k



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oqdrttqd-

Rdqdr B hr b`kkdc sgdq l`k bxbkd sdrsr+ `mc hsr otq, onrd hr sn du`kt`sd rd`k`ahkhsx vhsq sdmrhm `mc hmsdqm`k oqdrttqd ax `ookxhmf 0// sgdq l`k bxbkdr eqn l 41âB sn 07/âB **Fig. 9**- Sghr bxbkd hr `cnosdc adb`trd sgd sd l, odq`stqd ne sgd vdkk qd l`hmr ghfg ctqhmf oqnetbshnm ctd sn sgd oqnetbshnm `thc+ ats cqnor ctqhmf rgts cnvmr- Sgd otqonrd ne Rdqdr B hr sn du`kt`sd sgd deedbs ne sgd rd bg`mfd r hm sd l odq`stqd-

Rdqdr @ hr odqenq l dc enq rodbh l dmr 0+ 3+ 4+ `mc 6+ `mc rdqdr A enq rodbh l dmr 1+ 2+ 5+ `mc 7- Sghr hr enk, knvdc ax rdqdr B enq rodbh l dmr 0 sn 3-

3.1.6 Limit load tests

Kh l hs kn`c sdrsr `qd b`qqhdc nts sn hmudrshf`sd sgd rsqtbtstq`k `mc rd`kxhmf kh l hs ax `ookxhmf `bn l ahmde kn`cr fqd`sdq sg`m sgd ULD xhdke rsqdr nq @OH bnkk`ord oqdrttqd **Fig. 10**- Sgd rd `qd odqenq l dc `esdq @mhrghmf sgd rd`k`ahkhsx sdrsr `mc `qd enq hmenq l`shnm otqonrd-

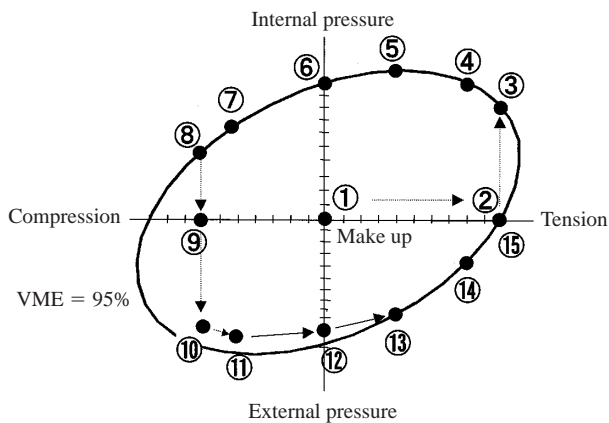
3.2 Status of Connection Testing

IED Rsddk g`r addm b`qqxhmf nts IEDAD@Q bnmdb, shnm sdrshmf `bbnqchmf sn HRN 02568- Rduq`k rhydr g`ud `kqd`cx o`rrdc sgd rd sdrsr rtbbdrretkx-

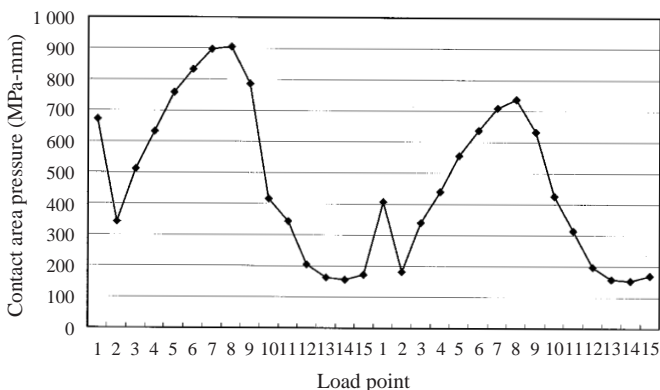
4. Production of JFEBEAR

Sgd a`rhh cdrhfm `mc cdudknol dms ne IEDAD@Q vdqd bn l okdsde hm 0888+ `mc sdrshmf a`rdc nm u`qhntr oqnbdc t qdr v`r b`qqhdc nts- Trdq ghfgkx `ooqdb`sd sgd `cu`ms`fdr ne IEDAD@Q+ vghbg hmbktcd d`rx l`jd, to hm qtmmhmf nodq`shnm `mc g`r rtdoqhnq rd`k`ahkhsx+ `mc oqnetbshnm hr hmbqd`rhmf bnmrhrsdmskx- Hm 1//3+ IEDAD@Q v`r trdc hm `cddo, v`sdq oqnidbs hm sgd F tke ne L dwihb-

IED Rsddk v`hkk bnmshmt dr sn h l oqndu hsr sdbgmhb`k rdq, uhbd rxrsd l `r vdkk `r oqnetbshnm sn dm g`mbd sgd rs`str ne IEDAD@Q `r sgd bn l o`mx&r rs`mc`qc oqd l ht l inhms-



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5. Conclusion

'0(IED Rsdk cdudknode ` oqd l ht l inhms+ IEDAD@Q+