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List of Abbreviations

AWTT	Auto – warning Tell-tale
CIL	Coal India Limited
CM	Continuous Miner
CMR	Coal Mine Regulations
CMRI	Central Mining Research Institute
DHTT	Dual Height Tell–tale
FISH	FLAC – ISH (language of FLAC)
FLAC^{3D}	Fast Lagrangian Analysis of Continua in three dimension
FOS	Factor of Safety
GSI	Geological Strength Index
LTD	Load Transfer Distance
MOC	Ministry of coal
RBE	Roof Bolt Extensometer
RMR	Rock Mass Rating
RQD	Rock Quality Designation
RTT	Rotary Tell–tale
SCCL	Singareni Collieries Company Limited
SECL	South Eastern Coalfields Limited
SF	Strength Factor
SR	Stress Ratio
UCS	Uniaxial Compressive Strength
US	United States

List of Symbols

I	Cavability Index
σ	Uniaxial Compressive Strength
l	Average length of core
t	Thickness of strong bed
s_p	Strength of pillar
w	Width of pillar
h	Height of pillar
s_{cube}	Strength of cubical pillar
D	Depth of cover
°	Degree
c	Cohesion
ϕ	Friction angle
D_{max}	Maximum depth of cover
SR_W	Stress ratio of working pillar
SR_B	Stress ratio of barrier pillar
$FOS_{Development}$	Factor of safety of pillar during development
L	Load-bearing capacity of remnant
A	Area of remnant
L_P	Load-bearing capacity of previously extracted pillar
L_W	Load-bearing capacity of working pillar
SF_W	Strength Factor of working pillar/remnant
SF_P	Strength Factor of previously extracted pillar/remnant

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