

Notation

The definitions of the symbols used in the thesis are given below in separate alphabetical lists of first Roman, then Greek characters.

Roman characters

A	Heat flux
B&I	Building costs
D	Modifying factor
E_e	Expected value
E_{mp}	Most probable value
E_o	Optimistic estimate i.e. probability is 5%
E_p	Pessimistic estimate i.e. probability is 95%
Equip	Equipment costs
EV(x)	The expected value of event (x)
F^r	Survey showing a rise in the market
i	Interest rates
I(x)	Impact if event (x) happens
k	Parameter depending upon the size of the sample
L	Initial flame length
m	Gas mass release rate
m	Number of observed incidents
N	Number of years
n	Sample size
n	Number of ESD valves
$P(E_i)$	Prior probability of event E_i
$P(E_j)$	Posterior probability of event E_j
$P(E_i / F^k)$	Posterior probability of event E_i given F^k has occurred
$P(E_1)$	Probability of a rise in the market
$P(E_2)$	Probability of a stable market

$P(E_3)$	Probability of a fall in the market
$P(F^k / E_j)$	Conditional probability of outcome F^k given E_j has occurred
$P(x)$	Probability of event (x) occurring
P_{ESD}	Historical unavailability of an ESD valve
P_{ign}	Probability of ignition
r	Parameter depending upon the dispersion of the sample
RA_1	Risk adjustment to reflect the normal risk of the business carried on by the decision-maker
RA_2	Risk adjustment to reflect special risk exposure for the project/ component of the project and the attitude taken by the decision-maker
$RADR_i, P$	i th RADR for a particular project or cost model, P
RFR	Risk free discount rate
V_p	Variance

Greek characters

β	Common mode failure probability
γ	Coefficient of variation
σ	Standard deviation
χ, μ	Mean
α	Probability coefficient