



SRESA Newsletter

Issue-1 (Jan-Mar) 2023

A quarterly publication of Society for Reliability and Safety [Reg. No. 3141/2010/G.B.B.S.D.], Mumbai



Publication of a Book by Springer on Risk-Conscious Operations Management Author Dr. P.V. Varde

Editor

Prabhakar V. Varde

SRESA Mission

One of the important aims of SRESA was to develop standards, codes, and guides in risk and reliability for engineering as well as societal applications. We, at SRESA are at the advanced stages of publication of first SRESA standard on "Probabilistic Risk Assessment of Nuclear Plants". Publication of this SRESA standard will set the ball rolling for new standards, codes, and guides. As such the efforts are on to develop the second SRESA standard / Guide on Elevator Safety.

From the President's Desk



The field of risk assessment and management traditionally had its roots in technological systems in general and safety critical systems. In recent times or to put the things in perspectives, last three decades risk has acquired many dimensions as also its applications. If we look at the financial institutions like insurance, banking, mutual funds, investment decisions, apart from other factors, the risk factors provide the required input in support of decisions. Similarly, in social sectors, be it agriculture, electricity generation and distribution, security, road transport, education, medicine, water management, risk management has been actively used. If we look at the newspapers headlines every third item directly or indirectly reflects one or more component of risk at its core.

There are some challenges like Fire and flooding risk in residential areas, farmers suicide, accidental risk, banking frauds are some of the important issues that need urgent action. It is not that government and societies are not aware of the problems. For example, take the case of farmer's suicides. Government is allocating lots of funding to reduce the financial stresses in farming sector but still the desired outcome is still at large.

What is required is a systematic root cause analysis of the problems, an in-depth assessment and then implementation of a plan such that a dynamic evidence-based framework can be instituted to address the issue.

- Prabhakar V Varde

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Strengthening Elevator Safety Towards Achieving Zero Fatality Target

Rajnikant Lad, Elevator Auditor, Thane

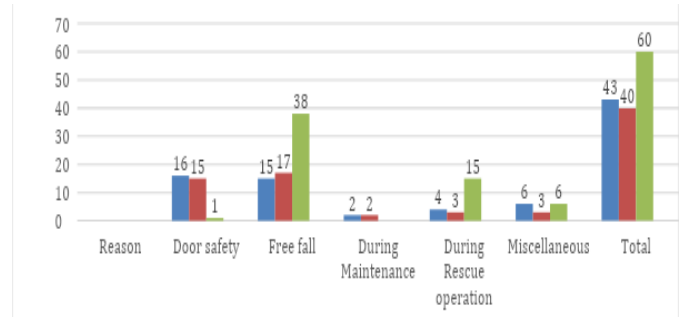
Elevator accidents and passenger death are major concerns for all Elevator Manufacturers, Service Providers, and Government Agencies. The number of elevator installations in India is increasing year after year. Thanks to the change in Government policies and regular improvement in the safety systems and procedures which helps users to enjoy safe travel.

As per the data available, the elevator requirement around the year - 2010 was nearly 30,000 units, which has gone up to 85,000 units in the year 2022. The total number of installed elevators in the country by 2022 have crossed 7,00,000 units. The regular

increase in the number of elevator installations demanded a proportionate increase in the safety monitoring system by the controlling authorities. To study the reasons behind the elevator accidents I have collected accident data for the period January 2019 to December 2022 and from January 2008 to December 2012, which helped me a lot in understanding the issue in depth.

Let us study the accident details:
Bar chart 1: Elevator Accident Analysis - January 2009 to December 2012 (Source - EWI, Print Media)

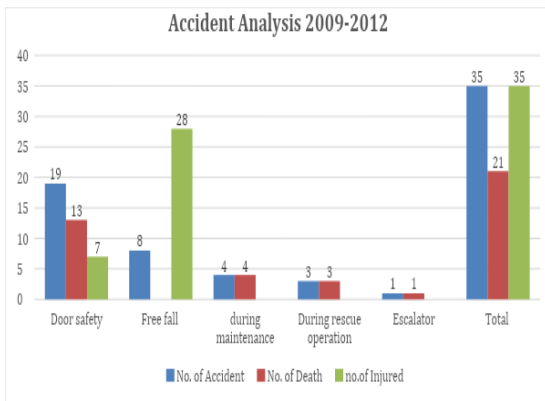
Cause	No. of Accident	No. of Death	No. of Injured
Door safety	19	13	7
Free fall	8	0	28
During maintenance	4	4	0
During rescue operation	3	3	0
Escalator	1	1	0
Total	35	21	35



The study is divided into four most common failure area which includes-

- 1-Door accidents,
- 2-Free fall,
- 3-Rescue operations
- 4-Maintenance work
- 5-Miscellaneous

Let us study the accident's root cause one by one with possible solutions.



1-Door open



Bar chart II: Elevator Accident Analysis - January 2019 to December 2022. (Source - EWI, Print Media)

Reason	No. of Accidents	No. of Death	No. of Injuries
Door safety	16	15	1
Free fall	15	17	38
During Maintenance	2	2	0
During Rescue operation	4	3	15
Miscellaneous	6	3	6
Total	43	40	60

The number of accidents/deaths is more in Door accidents cases as compared to the other failure reasons.

Door accidents amount to 37% of the total accidents. This has gone up from the decade-old data which was reported as 20%. Let us go into further detail about the failure causes. Door lock shortening or contact failure is the most common cause of accidents. Possible reasons for door lock shortening.

spares issue.

work pressure for the service technicians.

Incompetency of technicians.

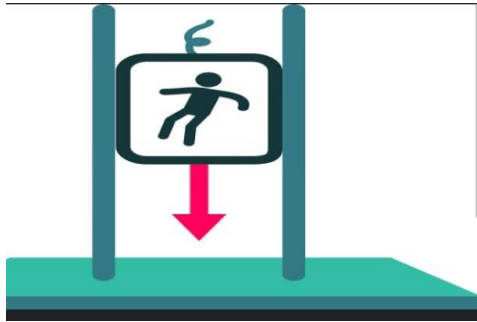
All these issues are because of a lack of monitoring and can be considered human error/failure.

Possible reasons for lock contact failure

Excessive use beyond the designed life cycle.

Material quality issue.

2-Free fall



Free fall again is a vague reason for failure or accident. There can be many reasons for an elevator to come down suddenly, without any control. The data analysis shows that the number of free fall accidents is around 35% in recent years, which is much higher than the decades-old figure of 22%.

The possible reasons could be -

- a-Pulley groove worn out,
- b-Reduction in rope diameter over some time,
- b-Brake failure,
- c-Rope broke including governor rope,
- d-Drive feedback circuit failure.

The root cause of all these failures could be mainly lack of routine maintenance, safety audit, and negligence and can be termed as human error.

3-Rescue operation

In case of any failure, the elevator gets stopped. This results in Passenger trapped conditions and is very common. But what is important here is, not the passenger trapped situation, but most importantly how they are rescued. Most of the rescue operations are taken up by untrained or less informed persons and this results in accidents or major losses.



The best way to control such accidents is to keep some occupants/security staff/society committee members as volunteers who are given required rescue training by the service provider. The number of accidents during rescue operations is around 9% which is the same as the old records. This in terms of the percentage of total installation can be taken as a good improvement.

4-Maintenance work

The accidents which take place during maintenance work resulting in injury or death of service technicians are the result of -

- a-Lack of training for the technicians,
- b-Careless approach by the technicians,
- c-Excessive workload or Overburden,
- e-Use of improper tools,
- d-Shortcut approach.

This is purely in the service provider's domain but can be considered a human error.

However, there is considerable improvement in the number of accidents taking place during maintenance work. If we go into further details of the accidents, we will notice a few similarities-

- a-In most of the cases, the elevators were under a maintenance contract with a small unorganized service contractor.
- b- Most of the accidents were reported from SRA buildings, Housing board buildings, or Tenant buildings. There was a request letter from the Chief Electrical Inspector to the C.E.D. of S.R.A. Projects (which appeared in the newspaper also) that there is an urgent need for stringent safety standards for the design and construction of elevators/lifts in S.R.A. buildings.

In case of any failure, the elevator gets stopped. This results in Passenger trapped conditions and is very common. But what is important here is, not the passenger trapped situation, but most importantly how they are rescued.

Most of the rescue operations are taken up by untrained or less informed persons and this results in accidents or major losses. The best way to control such accidents is to keep some occupants/security staff/society committee members as volunteers who are given required rescue training by the service provider.

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5- Miscellaneous

This accident category includes accidents because of rope breakage, brake failure, control failure, or any other part failure leading to the death or injury of the passengers.

This accident can be easily avoided by taking service activities seriously, and repairing or replacing the parts before it leads to major failure or accident. The breakage of rope cannot happen in one day. It may start showing stand breakage and ultimately lead to rope

breakage over some time. The Service technician can not overlook such issues. He needs to be more careful and vigilant. These accidents are around 14% of the total accidents reported presently.

From the above statistics, one can easily conclude that the number of accidents and passenger deaths, in absolute terms, is increasing even after continuous improvements in elevator systems and procedures. This makes us rethink our elevator safety systems, training, rules and procedures, checks, and cross-checks.

CONCLUSIONS

From the above chart, we can easily conclude that the death percentage is higher in the case of door safety, free fall, and maintenance. Whereas the death percentage during rescue operations and miscellaneous categories is slightly low. We need to focus more on accidents due to door safety, free fall, and maintenance issues.

The possible solution or action suggested.

1-Awareness among users -

It is noticed that in most cases deaths or serious injuries are reported because of a lack of awareness regarding elevator safety and rescue procedures.

The trapped passengers panicked and the person present outside without knowing the rescue procedures tries to help the trapped passengers.

We need to educate the users that as long as they are inside the elevator and not trying to come out till the elevator is brought to the nearest floor level, they are safe. This procedure takes 5-10 minutes only. The only time taken by the service technician to reach the site is not certain. It all depends upon the time taken by him in reaching the spot. All this depends upon his location, mode of travel, and local traffic conditions.

The persons available outside the elevator need to update the trapped passengers about the action taken and provide moral support till the technician reaches the site.

2-Rescue training

The analysis confirms that we still need to create awareness among the users and increase the frequency of safety training and rescue training for the security staff and service staff. Create volunteers in society and provide them required training.

The licensing authority can work out a suitable module where the volunteers are provided a short-duration practice training and are awarded a certificate for the same.

Even the licensing authority can think of authorising service providers to take up the responsibilities of training and issuing certificates to the society office bearers and security staff.

3-Introduction of uniform lift rules all over the country and their monitoring.

All the Indian states need to have their elevator inspection departments. At present only 11 Indian States /UTs require lift licences which include Maharashtra, Gujarat, Jharkhand, Tamil Nadu, Karnataka, Kerala, West Bengal, Assam, Himachal Pradesh, Haryana, and Delhi. Other states still must introduce a structured procedure for getting the operating license, monitor the elevator activities, and provide guidelines for the users as well as suppliers.

The data reveals that the deaths due to elevator accidents are mainly reported from elevators maintained by freelancers / unorganised sector, irrespective of their make. This leads us to work for an effective and feasible method for providing training, creating awareness, and introducing checks for this unorganised sector. Introducing safety audits by qualified/certified auditors can play a great role in improving the safety and reliability of the system.

4-Introducing additional safeties-

Most of the accidents are reported because of free falls and door-open conditions. There are a few suggestions to minimise these failures and losses.

a-Providing hydraulic buffers for all elevators can reduce the accidents/losses faced because of sudden falls / free falls of elevators.

b- Working out for a sensor to detect the presence of the elevator cabin and provide a warning in case the door opens. This can help in reducing accidents because of door open issues.

5-Addressing unorganised sector issues

Societies need to save money to meet the high service charges of Organised players. The organised sector should work out some long-term plan so that the elevator remains with them for a longer period, if not for its life cycle.

Maybe offering a service contract with the initial lift supply order for 10-15 years or a lift life cycle can make a good change.

The expenses towards major repair or modification must be considered under the building repair activities and the society must be allowed to utilise the money from sinking funds towards this work. Societies must take proper care while selecting the service provider. Particularly in the case of going for the unorganised sector, one must go into the details of the agency, its service setup, competency, financial status, and records.

6-For the Government authorities and Policymakers-

From the latest accident records, we can easily point out the area where more action or attention is required.

a-Sra building lifts reported 7 accidents out of a total 43 which comes to 16% whereas the 10 deaths come to 25% (10 out of 40).

b- Unorganised sector -

Almost all the elevators where accidents/death are reported are maintained by small, unorganised service providers, irrespective of the make of the elevator.

c-Accidents in states where lift rules are not there. Out of 43 accidents 10 accidents are reported from the states where lift rules are not implemented. Which comes to around 23%. The death records in these cases count to 12 deaths out of 40 deaths. This is nearly 30%. The industry is constantly working for the safety of the users and the reliability of the equipment. The latest ISI7900 part 1 & 2 with many changes, is in the pipeline and may be available for the benefit of users and the industry at any time. Society for Reliability & Safety (SRESA) being in the field of reliability and safety can contribute its expertise in strengthening the Elevator Industry. I volunteer to provide the

required inputs and support to the SRESA team for further studies in this area.




About the Author

Rajnikant Lad is an Electrical Engineering graduate of Jabalpur Engg. College and holds four decades of experience in Elevator Industry. He is very active in creating safety awareness among the elevator users through training, publishing articles in magazines, and other media platforms. He is founder of Elevator user's Safety Forum and an active

member National Safety Council. He has been publishing articles in Elevators World Magazine.

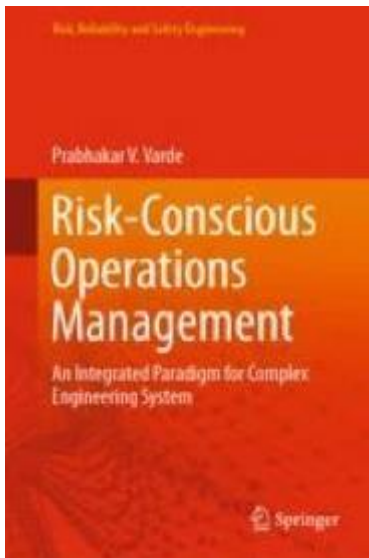
SRESA Welcomes New Life Members

Life Member	A brief introduction
<p>Mr. Sandip Bhalerao</p> 	<p>Mr Bhalerao obtained his Masters (M.Tech.) in Structural Engineering and presently working as Scientific Officer, F, with Nuclear Recycle Board, Dept of Atomic Energy. Since his specialization is structural analysis & Design he is involved in many projects in NRB, to support analysis and design of civil structures. He is also involved in seismic qualification, non-destructive testing, safety margin assessment of structures of nuclear fuel cycle facilities at NRB.</p>
<p>Mr. Vikram Kumar Gupta</p> 	<p>Mr Gupta is presently a research scholar at IIT, Kharagpur. He has successfully completed his MTech, performing R&D work as part of his doctoral work at IIT, Kharagpur. He is specialist in the area of quality and reliability. He is Certified Six Sigma Green Belt & OHSMS 45001:2018. He has MEMBERSHIP of: QCI India, BEEE India, IE, POMS, TERA, IAENG and NSDC. He is also past associate of ISB (Operations Management Research and IIM-Indore).</p>
<p>Dr. S. Muthukumar</p> 	<p>Dr. Muthukumar is a Ph.D. from NIT, Warangal, Telangana and presently working as Scientist F, at Defence Research Development Organization, Hyderabad. At DRDO, he is Heading Quality (Mechanical) group / section. He has 21 years of experience in quality and reliability of Missile Systems.</p>

Recent Book Publications in Reliability and Risk

“Risk-conscious Operations Management – An Integrated Paradigm for Safety Critical Systems”

Author : Prof. Prabhakar V Varde



My experience in nuclear plant operational safety for over 30 years reaffirmed my motivation to write a book on ‘Risk-conscious Operations Management’. The history of accident world over highlights postulation of role of risk management in operational environment, particularly for safety and mission critical systems. In this context, apart from engineering complexity,

external factors put the whole operations management to new tests where decisions play the critical role. One more aspect that is vital in the context of risk or safety is that the attention for safety finds a paradigm shift. The responsible factors are causes for the undesired events suddenly catch attention. However, if the same aspects were argued before the accident or threat, it will be a challenging to put forward and accepted for further actions.

Another motivation for me to work on this project was that, after publishing the book entitled ‘Risk-based Engineering’ in May 2018, co-authored with Prof. Michael Pecht, it was natural for me to develop a subject ‘risk-conscious operations management’ where the focus is on management of assets such that risk is acceptably low but further lower such that safety margin increases, while system performance and deliverables meet the set objectives, be it complex nuclear systems, process and chemical plants, space or aviation, etc. Even though the nuclear industry has always been relatively safe or conversely speaking risk-conscious-society where safety is an overriding factor, after devoting my significant part of carrier on modeling for probabilistic risk assessment (PRA),

I felt there is new approach required to understand and model not only human-machine interface but the organizational aspects with an aim to reduce the possibility of human error. Hence, I felt the need to have a single point reference for operations risk-conscious management that

deals with, apart from routine activities and anticipated transient, management actions to control deviations from normal operations or even abnormal / accident conditions. My experience in operations manning and later operations management of nuclear reactors and regulatory activities was the major driver for me to develop this subject not only for safety or conversely risk critical systems like nuclear plants, but also for other systems where risk-conscious approach can provide an improved framework even to meet the performance targets more effectively.

This book proposes given the idea, and level of detailing on human reliability consciousness presents a new integrated paradigm for complex engineering systems. The subject also deals with a complex operational environment where the two otherwise contrary objectives, i.e. maintenance of high performance or deliverables and higher safety, i.e. ensuring lowest risk are to be optimized such that plant meets all expectations of production while keeping the risk levels are acceptably low such that operations of the system is justified in meeting societal objectives. Even though the plant design procedures have human considerations as one of the major factors the role of human in operations management, at times become demanding. One of the major characteristics of the operations management is that even though enough automation, redundant provisions, application of diversity, availability of adequate thermal and nuclear margins, it is human interaction intensive ecosystem particularly during emergency and the human factor plays a critical role for maintaining production objective while maintaining the lowest achievable risk levels. The history of accidents in operation of risk and mission critical systems; like energy producing systems, e.g., nuclear, thermal, space, hydro systems, process, and chemical industry; and various modes of transport like aviation, railways, road transport, e-cybernetics; reveals that human error is one of the major contributors to accident. The message is clear and loud, operational aspects, particularly human factor improvements as also reducing dependence on human interaction particularly the one postulated for emergency scenario requires a special attention.

This book is based on my over 30 years’ experience on nuclear reactor operations and research on probabilistic risk assessment that includes modelling of human factor. A conscious attempt has been made to keep the narrative as generic such that specifics as also mathematics can be

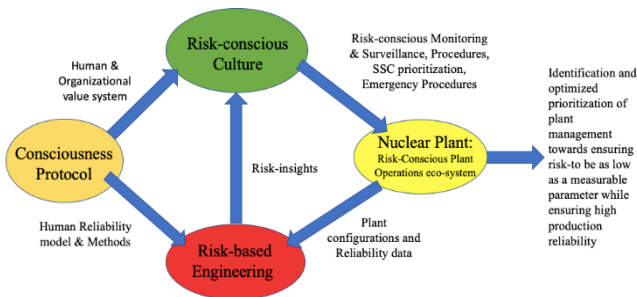
avoided, however, wherever required to communicate the concept, while avoiding the specificity a general approach has been used, in fact, this book is a sequel to the first book 'Risk-based engineering – An integrated approach to complex engineering systems' published by Springer in 2018. This book has created a new subject 'Risk-based engineering' where it takes the existing field of probabilistic risk assessment, that led to development of risk-informed decisions and finally the risk-based engineering by providing an integrated approach where the deterministic and probabilistic approaches in risk assessment consolidates the subject into risk-based methodology. This book was published in 2018 and doing well amongst the researchers, academicians and scholars and students with ~ 20,000 downloads. In Risk-conscious operations management, the idea has been further extended to operational environment keeping in typical characteristic of

levels. This work is employing to the extent possible the applied and consensual concepts of consciousness, postulates and assumptions that are based on either philosophical or spiritual references such that evidence at experiential levels, if not at the measurement levels are available, to create a more robust human model to support risk-reduction and understanding of operational environment. Since the human error is the major contributing factors to unavailability and risk this book presents the risk-conscious operations management approach and expects that application of this framework has potential to risk reduction in complex engineering systems.

Prof. Prabhakar V. Varde is a scientist, engineer, leader, teacher, guide, mentor, author, and an administrator. He is a mechanical engineer by education, nuclear engineer by profession and a well-known expert in probabilistic risk assessment and its application as part of risk-based engineering. He started his carrier at Bhabha Atomic Research Centre in 1983



as nuclear engineering trainee of BARC Training School 27th Batch and after successfully completing the of training joined erstwhile Reactor Operations and Maintenance Group now Reactor Group, served as operations engineering for Dhruva – a 100 MW research reactor at BARC and rose through the administrative ladder and retired in 2019 as Associated Director, Reactor Group. During his service, he completed his Ph.D. from IIT, Bombay in 1996 and later focussed his research on nuclear safety in general and Risk-based engineering in particular, while working for reactor related services responsibilities. He also served as Senior Professor, Guide and Member of the Board of Studies in Engineering Sciences of Homi Bhabha National Institute, Mumbai from 2009 till 2020. He served as Indian specialists / experts, to International Atomic Energy Agency (IAEA), Vienna during 2002 – 2020. Nuclear Energy Agency (OECD/NEA) France, during 2011-2016. He also served on Select Panel for recruitment / promotions and examiner at IIT, Bombay and IIT, Kharagpur. He has also served as Ph.D. thesis evaluator and examiner at, IIT Bombay, IIT, Kharagpur, IIT Madras, Delhi University, IIITDM Jabalpur and Dhanbad Institute of Mines and many other national institutes. He did his postdoctoral research at Korea Atomic Energy Research Institute, for a period from Nov. 2002 – Apr. 2003. He is a Visiting Professor at CALCE (Center of Advanced Life Cycle Engineering), University of Maryland, USA. He is



operations where apart from hardware and software system performance human performance is critical particularly during deviation, off normal and accident conditions.

The striking feature of this book is that it uses 'risk' as the central idea in place of 'safety' for one simple reason that risk has a mathematical connotation which provides opportunity for using parameters that can be measured unlike 'safety' which can be an ever-moving vague and imprecise target, where risk being a quantified entity tends to serve better that also include presenting the uncertainty. The second feature is application of an approach that tends to be more holistic for treating human model not based on symptoms but based on the first principal treatment to human model for evaluation of human performance right going to deeper level of consciousness the main driver of human system. It may be noted that consciousness itself is a subject of research and there is no consensus amongst the spiritual / philosophical, neuroscience, quantum mechanics, chemical science experts as to what is consciousness. To address this challenge, it was required to have available references in the ancient book of records where there were strong references were to the understanding of not only consciousness but elegant input on human model. To this book uses certain facts, like all agree that consciousness exists, consciousness can be related to at higher level to alertness and awareness and finally 'since we are conscious, we are existing'. The research has found many measurable parameters at the level of brain to assess consciousness

also Honorary Professor at Amity Institute of Nuclear Science & Technology, Amity University, Noida and Honorary Professor of Practice at IIT Madras, India. He has over 250 research publications at national and international level which also includes co-authored / edited 18 books and proceedings. Recently co-authored a book with Prof. M.G. Pecht, entitled 'Risk-based Engineering' published by Springer.

He received many awards and recognition. In recent time he received Homi Bhabha Group Achievement Awards in 2017 and 2018 for Design and development and commissioning of Apsara reactor, and Development and commissioning of Dhruva research reactor Simulator. He is lead co-founder for Society of Reliability and Safety (SRESA), based in India, in 2010.

He established International Conference on Reliability and Safety (ICRESH) series of Conferences and organized ICRESH-2005, ICRESH-2010 in Mumbai, ICRESH-2015 in LTU, Sweden and ICRESH-2019 in IIT, Madras. He also organised 5 national conferences in Reliability and Safety (NCRS) in different cities in India. He launched an 'International SRESA Journal of Life Cycle Reliability and Safety Engineering' in 2012, and now the journal has published 11th Volume successfully in 2022 presently being published by Springer. He is one of the Editor-in-Chiefs for this journal. He is also serving as President, Society for Reliability and Safety, India. In this this book, entitled Risk-conscious operations management - A new integrated paradigm for complex engineering systems, Dr Varde shares his experiences and expertise in the area of nuclear plant operations and application of probabilistic risk

assessment to formulate a new strategy that essentially involves development, modelling and management of human and organizational factors and tends to be promising and effective for reducing contribution of human errors to plant unavailability and potential risk.



SRESA Audit Statement for the Financial Year 2021-2022

**Report of an auditor relating to accounts audited
Under sub-section (2) of section 33 & 34 and rule
19 of the Bombay Public Trust Act.**

Registration No.: - **F-43051 (Mumbai)**

Name of the Public Trust: - **SOCIETY FOR RELIABILITY AND SAFETY**

For the year ending:- **31st March, 2022**

(a)	Whether accounts are maintained regularly and in accordance with the provision of the Act and the rules;	Yes
(b)	Whether receipt and disbursement are properly and correctly shown in the accounts;	Yes
(c)	Whether the cash balance and vouchers in the custody of the manager or records required by date of audit were in agreement with the accounts;	Yes
(d)	Whether all books, deeds, accounts, vouchers or other documents or records required by the auditor were produced before him;	Yes
(e)	Whether a register of movable and immovable properties is properly maintained, the changes therein are communicated from time to time to the regional office, and the defects and inaccuracies mentioned in the previous audit report have been duly compiled with;	N.A.
(f)	Whether the manager or trustee or any other person required by the auditor or appear before him did so and furnished the necessary information required by him;	Yes
(g)	Whether any property or funds of the Trust were applied for any object or purpose other than the object or purpose of the Trust;	N.A.
(h)	The amount of outstanding for more than one year and the amount written off, if any	Nil
(i)	Whether tenders were invited for repairs or construction involving expenditure exceeding Rs. 5000/-;	N.A.
(j)	Whether any money of the public trust has been invested contrary to the provisions of Section 35;	No
(k)	Alienations, if any, of the immovable property contrary to the provisions of Section 36 which have come to the notice of the auditor;	No
(l)	All cases of irregular, illegal or improper expenditure, or failure or omission to recover monies or other property belonging to the public trust or of loss or waste of money or other property thereof, and whether such expenditure, failure, omission, loss or waste was caused in consequence of breach of trust or misapplication or any other misconduct on the part of trustees or any other person while in the management of the trust;	No
(m)	Whether the budget has been filed in the form provided by rule 16A;	No
(n)	Whether the maximum and minimum number of the trustees is maintained;	Yes
(o)	Whether the meetings are held regularly as provided in such instrument;	No
(p)	Whether the minutes books of the proceedings of the meetings is maintained;	No
(q)	Whether any of the trustees has any interest in the investment of the trust;	No
(r)	Whether any of the trustees is a debtor or creditor of the trust;	No
(s)	Whether the irregularities pointed out by the auditors in the accounts of the previous year have been duly compiled with by the trustees during the period of audit;	Yes
(t)	Any special matter which the auditor may think fit or necessary to bring to the notice of the Deputy or Assistant Charity Commissioner.	Nil



For M S V & Associates
Chartered Accountants

(Signature)
CA. Santosh Mane
Partner

M. No. 125370
FRN-130455W

UDIN: 23125370BGRIWI7849

Place : Mumbai


Date : 5th November 2022

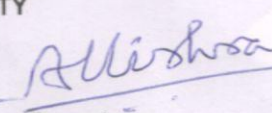
Statement of income liable to contribution for the year ending **31st March, 2022**
Name of the Public Trust **SOCIETY FOR RELIABILITY AND SAFETY**
Registration No. **F-43051 (Mumbai)**

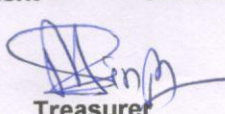
	Rs.	Rs.
I Income as shown in the Income and Expenditure Account (Schedule IX)		3,72,233/-
II Items not chargeable to Contribution under Section 58 and Rules 32 :		
i) Donations received from other Public Trust and Dharmadas	-	
ii) Grants received from Government and Local authorities	-	
iii) Interest on Sinking or Depreciation Fund	-	
iv) Amount spent for the purpose of secular education	-	
v) Amount spent for the purpose of medical relief	-	
vi) Amount spent for the purpose of veterinary treatment of animals	-	
vii) Expenditure incurred from donations for relief of distress caused by scarcity, drought, flood, fire or other natural calamity	-	
viii) Deductions out of income from lands used for agricultural purposes :-		
a) Land Revenue and Local Funds Cess	-	
b) Rent payable to superior landlord	-	
c) Cost of production, if lands are cultivated by trust	-	
ix) Deductions out of income from lands used for non-agricultural purposes :-		
(a) Assessment, cesses and other Government or Municipal Taxes	-	
(b) Ground rent payable to the superior landlord	-	
(c) Insurance premia	-	
(d) Repairs at 10 per cent of gross rent of building	-	
(e) Cost of collection at 4 per cent of gross rent of buildings let out	-	
x) Cost of collection of income or receipts for securities, stocks, etc. at 1 per cent of such income	-	
xi) Deductions on account of repairs in respect of buildings not rented and yielding no income, at 10 per cent of the estimated gross annual rent	-	
xii) Deduction on account of Miscellaneous Expenses	-	
Gross Annual Income chargeable to contributions		3,72,233/-

Trust Address:
Society for Reliable and Safety
C/o Shri S J Raut
64 Vibha R Paramhans Marg,
Opp Cardinal Gracious High School, Bandra (East),
Mumbai - 400051.

For SOCIETY FOR RELIABILITY AND SAFETY


① **President**


Secretary


Treasurer

For M S V & Associates
Chartered Accountants


CA. Santosh Mane
Partner

M. No. 125370
FRN-130455W

UDIN: 23125370BGRIWI7849

Place :- Mumbai
Date:- 5th November 2022

Name of the Public Trust :- SOCIETY FOR RELIABILITY AND SAFETY
Balance Sheet As At :- 31st March, 2022

FUNDS & LIABILITIES	AMOUNT (₹)	AMOUNT (₹)	ASSETS	AMOUNT (₹)	AMOUNT (₹)
Trust Fund Balance as per last Balance sheet Adjustment during the year (give details) Add: Life Membership Fees	- - -	- - -	Immovable Properties (At Cost) Balance as per Last Balance Sheet Addition During the Year Less : Sales during the year Depreciation up to date	- - - -	- - - -
Other Earmarked funds :- Balance as per last Balance sheet Depreciation Fund Sinking Fund Reserve Fund Any other Fund (Panipuravtha)	- - - -	- - - -	Fixed Assets (As per Annexure - A) Balance as per Last Balance Sheet Addition During the Year Less : Sales during the year Depreciation up to date	- - - -	- - - -
Loans (Secured or Unsecured):- From Trustees From Others	- - -	- - -	Investments FD with State Bank of India Add: Accrued Interest on Fd	11,00,000.00 17,156.00	11,17,156.00
Liabilities:- For Expenses - Income Tax Payable - Audit Fees Payable - Accounts Writing Charges Payable - Professional Fees Payable Unidentified Receipt	1,06,320.00 17,700.00 6,000.00 11,800.00	1,41,820.00 2,115.00	Loans (Secured Or unsecured) : Good / doubtful Other loans Tax Deducted at Source Advances Sundry Debtors	- - - -	1,000.00 1,000.00
Balance C/fd	1,43,935.00	1,43,935.00	Balance C/fd	11,18,156.00	11,18,156.00

Secretary
Secretary
Society For Reliability & Safety (SRESA)



For M S V & ASSOCIATES

PARTNER

Dr. P. V. Varde
Dr. P. V. Varde Society for Reliability & Safety (SRESA)
President
Society For Reliability & Safety (SRESA)

Treasurer


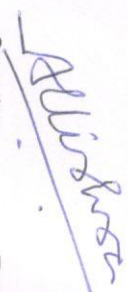

Balance B/d		1,43,935.00	Balance B/d		11,18,156.00
Income and Expenditure Account :-			Cash and Bank Balances :-		
Balance as per last Balance Sheet	11,76,593.65		a) In Saving Account	4,42,904.65	
Add : Appropriation, if any	-		- State Bank of India	-	
Less : Surplus as per Income and Expenditure Account	2,40,886.00		b) With the Trustee	-	
			c) With the Manager	354.00	
			d) Cash in Hand		
Total		15,61,414.65	Total		4,43,258.65

As per our report of even date

The above Balancesheet to the best of our knowledge and belief contains a true accounts of the Funds & Liabilities and of the property Assets of the Trust

Place :- Mumbai
Date :- 5th November 2022

For SOCIETY FOR RELIABILITY AND SAFETY


 President

 Secretary

 Treasurer

For M S V & Associates
 Chartered Accountants

 CA. Santosh Mane
 Partner
 M. No. 125870
 FRN: 130455W
 AUDITOR
 UDIN: 23125370BGRIW17849

Name of the Public Trust :-
Income & Expenditure A/c. F.Y. Ended :-

SOCIETY FOR RELIABILITY AND SAFETY
31st March, 2022

EXPENDITURE	AMOUNT (₹)	AMOUNT (₹)	INCOME	AMOUNT (₹)	AMOUNT (₹)
To Expenditure in respect of Properties					
Rates, Taxes, Cesses	-		By Rent	-	
Repairs & Maintenance	-		- Accrued	-	
Electricity Charges & License Fees	-		- Realised	-	
Insurance	-				
Depreciation (by way of provision of adjustment)	-				
To Establishment Expenses			By Interest		
Website Expenses	6,607.00		On Securities		
Bank Charges	670.00		On Loans		
Professional Fees	5,900.00		On Fixed Deposit	17,156.00	17,156.00
Accounts Writing Expenses	3,000.00	16,177.00			
			By Donations in Cash or Kind		
To Remuneration to Trustees			By Grants		
To Audit Fees			By Income From Other sources		
To Remuneration (in case of a math) to the head of the math, including his household - expenditure, if any		8,850.00	- Membership Fees		60,400.00
			- Royalty for Journal Subscriptions		1,50,087.00
			- Registration Charges		84,590.00
			- Sponsorship for Conference		50,000.00
To Amount Written Off:					
a) Bad Debts	-				
b) Loans Scholarship	-				
c) Irrecoverable Rents	-				
d) Other Items	-				
To Miscellaneous Expenses					
Income Tax		1,06,320.00			
To Depreciation					
Balance C/fd		1,31,347.00	Balance C/fd		3,72,233.00

FOR M S V & ASSOCIATES

PARTNER

Dr. P.V. Varde

Society for Reliability & Safety (SRESA)

Secretary
Society For Reliability & Safety (SRESA)

Society For Reliability & Safety (SRESA)

President
Society for Reliability & Safety (SRESA)

Balance B/d		1,31,347.00	Balance B/d		3,72,233.00
To Amount Transfer to Reserve or Specific Funds		-			-
To Expenditure on objectivs of the trust		-			-
a) Religious		-			-
b) Educational		-			-
c) Medical Relief		-			-
d) Relief of Poverty		-			-
e) Other Charitable Objects		-			-
To Surplus carried over to Balance Sheet		2,40,886.00			-
Total		3,72,233.00	Total		3,72,233.00

As per our report of even date

Place :- Mumbai
Date :- 5th November 2022

For SOCIETY FOR RELIABILITY AND SAFETY

President

(S)

Secretary

Treasurer



For M S V & Associates
Chartered Accountants

CA. Satosh Mane

Partner

M. No. 125370

FRN: 130455W

AUDITOR

UDIN: 23125370BGRIWI7849



Society for Reliability & Safety (SRESA)

(REG. No. : F-43051 (Mumbai))

SRESA COORDINATOR, SHRI S.J. RAUT, 64-VIBHA, R. PARAMHANS MARG

OPP. CARDINAL GRACIOUS HIGH SCHOOL; BANDRA(E) MUMBAI - 400051

Web Site: www.sresa.org.in (PHONE; +91-9892464817)

MEMBERSHIP APPLICATION FORM.

MEMBERSHIP NO'.

Managing Committee (2018 - 2023)

Hon. President

Prof. Prabhakar V Varde

Hon. Secretary

Dr. Alok Mishra

Hon. Treasurer

Dr. Manoj Kumar

Hon. Members

Prof. K. Bhargava

Prof. Raghu Prakash

Dr. R. Muthukumar

Dr. Tej Singh

Prof. P.K.Kankar

Dr. Hari Prasad

Prof. M.K. Vaishnavi

Chapter President /
Coordinator

Prof. Raghu Prakash

(Chennai Chapter)

Prof. V.K. Gupta

(Jabalpur Chapter)

Prof. P. Vaishnavi

(Trichy Chapter)

Prof. L.Y. Waghmode

(Sangli Chapter)

Mr. A.S. Jashi (td)

(Indore Chapter)

Prof. Kapilesh Bhargava
(Act.)

(Anushaktinagar Mumbai
Chapter)

1.	Name of applicant			Affix your stamp / passport size photograph and send a soft copy by email
2.	Qualification			
3.	Affiliation			
4.	Position held			
5.	Specialization			
6.	Official address <input type="checkbox"/>	Residential Address <input type="checkbox"/>		
(Please tick the address to be used for official communication)				
7.	Brief Bio-data:			
8.	Cell phone number and email address	Email:	Cell No:	
9.	Date of birth (DD/MM/YY)			
10.	PAN Number (not applicable for student)			
11.	Type of membership (Tick applicable category)	Petron (By Invitation) : Nil Honorary Member (By Invitation): Nil Life membership : Rs. 2,200/- Membership (annual) : Rs 1200/- Student membership : Rs 500/- (Please tick the applicable category)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
12.	Payment mode: i) Cheque <input type="checkbox"/> ii) Demand draft <input type="checkbox"/> iii) On-line transfer: <input type="checkbox"/> Cheque /DD/online transfer details : Date: Amount: Name of the Bank:..... Account number..... ISFC code			
12	Signature of applicant:			

• Please send the scanned copy of the form duly signed by email to Secretary, SRESA along with a soft copy of the passport size photograph to secretary@sresa.org.in and a copy to treasurer@sresa.org.in

• SRESA account details are as follow: Money to be transferred in favour of 'Society for Reliability and Safety', SRESA Account number: 3110442604, Bank Name: State Bank of India, Branch: Anushaktinagar, Mumbai 400094, Branch Code 010124, IFS Code: SBIN0010124.

• *will be allotted by SRESA Office.