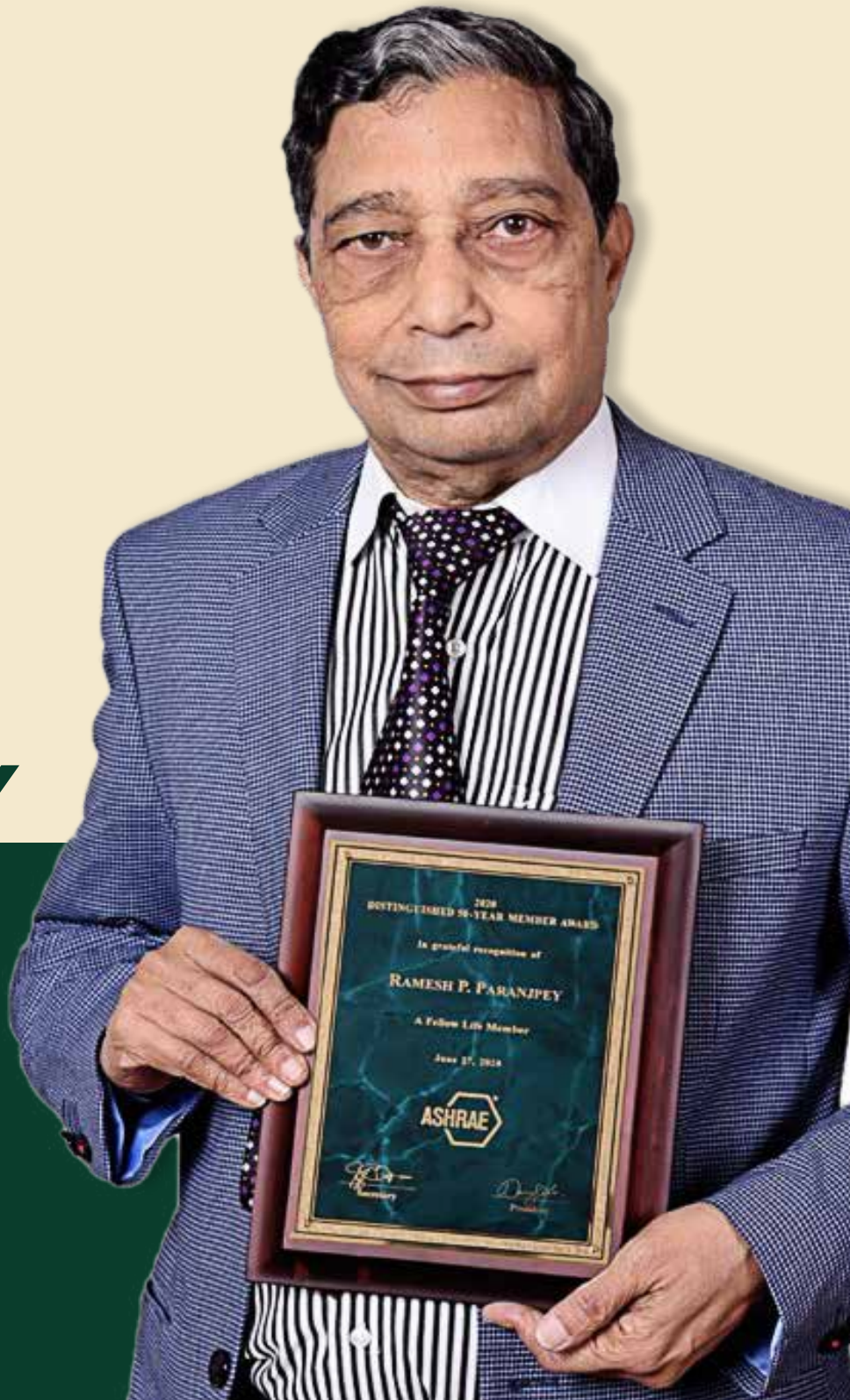
RAMESH PARANJPEY

PROFESSIONAL CAREER

3A/A1/11, New Ajanta Avenue
Near Krishna Hospital,
Paud Road, Kothrud,
Pune 411038, India
Cell : +91 98223 98220
http://ramesh-paranjpey.com



EDUCATIONAL QUALIFICATIONS

1. **B.E. Mechanical**
   1964 -Walchand College of Engineering, Sangli
2. **M. Tech. (Refrigeration)**
   1966- I.I.T. Mumbai

PROFESSIONAL MEMBERSHIPS

1. **Fellow Life Member**
   ASHRAE USA-Since 1971 (561087)
2. **Fellow Life Member**
   Institution of Engineers (No. F-12364-8)
3. **Chartered Engineer**
   (NO. F12364-8)
4. **ISHRAE Member**
   No. 14914-Since December 1999
5. **Ex-President**
   ISHRAE, Pune Chapter year 1998 - 1999
6. **Ex-President**
   ASHRAE Western India Chapter 2001- 2002
7. **Member-AAR**
   (Association of Ammonia Refrigeration) - 2012

Inspiring & Motivating Quotes

- RAMESH PARANJPEY

The difference between failure and success is doing the thing nearly right and doing the thing exactly right

-Edward Simmons

Nobody ever learnt anything from success, failure is the only teacher in life.

Good judgement comes from experience and experience comes from bad judgement.

It is nice to be important,
but it is more important to be nice

Either write things worth reading or
do things worth writing

Keeping oneself up to date is like riding a bicycle, either you keep going or you fall down

The reasonable man adapts himself to the world. The unreasonable one persists in trying to adopt the world to himself, therefore the progress is always dependent on unreasonable man-George Bernard Shaw.

When you fail to plan, you are planning to fail

There is a big difference between advice and help

A person who boasts of 20 years' experience, really has one-year experience twenty times over

CORPORATE CAREER

KIRLOSKAR PNEUMATIC

Started career in Kirloskar Pneumatic, Pune in 1967, as Project Manager to establish Air Conditioning and Refrigeration Division. Worked for 27 years, till 1993.

During this period implemented many successful collaborations for the first time in India, such as open type refrigeration compressors of Grasso Holland, Centrifugal machines of Hitachi-Japan, Screw compressors of Howden-U.K., Transport Air Conditioning & Refrigeration from Sutrak-West Germany, Flake ice plants, Carrier- USA, semi hermetic compressors, Packaged Air Conditioners.

Also responsible for turnkey projects, notable amongst these are :

1. Refrigeration Plants for Chemical and Dyestuff industry
2. Largest Refrigeration plant for IPCL Baroda,
3. Minus 80 C plant for HAL Nasik
4. Cargo Refrigeration Plants for Shipyards
5. Concrete cooling plants for dams
6. Ice cream plant for Walls at Nasik
7. Fertilizer plant for ICI
8. IPCL, Heavy water plants
9. Chilled water plants for Atomic energy

many comfort Air conditioning jobs such as International Airports at Delhi and Bombay.

At the time of leaving Kirloskar Pneumatic company, Vice President (Operations) heading a division of 400 people and with a turnover of 250 million Rupees.

CARRIER TRANSICOLD

Joined Carrier-Transicold, Bangalore in April 1993-1997 as its first Managing Director to set up operations in Bangalore for manufacturing Bus air Conditioning and Transport Refrigeration equipment. Shifted to Singapore & worked as Director Projects - for developing new products such as sub engine bus air conditioning unit & petrol driven bus air conditioning unit for APO market.

VOLTAS LTD

From 1st February 97, till 31st May 2003 worked as CEO for Voltas – Air International, **Pune** an Australian company specialized in transport air conditioning and having a joint venture in India with Voltas for manufacture of passenger car HVAC systems for TATA motors for Indica, SUMO & SAFARI models, also developed MIL grade A/C units 's for mobile shelters for defense department, bus and rail air conditioning and other off high way a/c systems. Plant is in Chanda Nager Pune.

Retired from corporate service in May 2003

SUBSEQUENTLY WORKED AS

1. Technical consultant to Voltas for two years (2003-2004) for design of Defense air conditioners
2. Technical consultant to Blue Star for two years 2004-2005 - designing cold storages with ammonia refrigerant
3. Technical consultant to Kishore pumps (2004-2005) for design of Ziegra Germany ice machine
4. Technical consultant to Thermax for design of Ammonia absorption machines
5. Consultant to Chemtrols Goa since 2009 for design of flame proof air conditioners for petrochemical industry
6. Technical consultant to Push Engg. Pune since 2003 for design of flake ice machines and concrete cooling projects as well as industrial refrigeration system design projects
7. From 2005-2012 on Director Board – S N Joshi consultants Pune – MEP consultants

AWARDS & ACHIEVEMENTS

NCRAC 2022

NCRAC 2022 ISHRAE ASHRAE

TIRUPATI

NATIONAL CONFERENCE ON REFRIGERATION AND AIRCONDITIONING 2020
(NCRAC 2022)

Feels privileged to honour

SHRI. RAMESH PARASHURAM PARANJPEY

With

THE 'DOYEN OF HVAC & R INDUSTRY' AWARD

Citation

"Excellence is the unlimited ability to improve the quality of what you have to offer." - ***Rick Pitino***

A product of IIT Bombay, you Shri Ramesh Paranjpey are an M.Tech in Refrigeration and this quote is so apt to you; you have worked with the giants in the HVAC&R industry holding top positions. You were Vice President of Kirloskar Pneumatics Ltd, Managing Director of Carrier Refrigeration, and CEO of Voltas Air International Ltd. With years of experience in the corporate world you are a trainer-par-excellence who has conducted training programs at Honeywell, Alfa Laval, Voltas, Bluestar, Thermax, Emerson, Tata Motors, ELGI, ISHRAE and ASHRAE in India and in other parts of the world. Your major training programs for Carrier-Singapore and Carrier-China in specialized bus air-conditioning, Ammonia refrigeration for Bluestar and NDDB-Anand, General training in AC&R for Bluestar and Voltas, and several technical programs for ISHRAE and ASHRAE including Psychrometrics, Cold storage design, environmentally friendly refrigerants and Industrial process plant design have enabled fresh and practicing engineers, architects and students gain immense technical knowledge. Your commitment to disseminating knowledge consistently has been truly extraordinary.

You Shri Ramesh Paranjpey have published more than 75 papers in International and national journals, have published books on 'ABC of Airconditioning' and 'All about insulation' for ISHRAE, 'Cold room solutions' for Emerson Climate Technologies, 'User guide' for Danfoss Controls, 'Air cool manual' for Alfa Laval, and 'Standards for Safe design of Ammonia systems' for AAR, to name a few! You Shri Ramesh Paranjpey have made immense contribution to ISHRAE and you are Fellow Life Member of ASHRAE; you have received the ASHRAE 50-year Distinguished Award in the year 2020, and many awards and accolades for your commitment in knowledge sharing to the HVAC&R Industry. You are a Fellow and Life Member, Institution of Engineers, India and a Chartered Engineer.

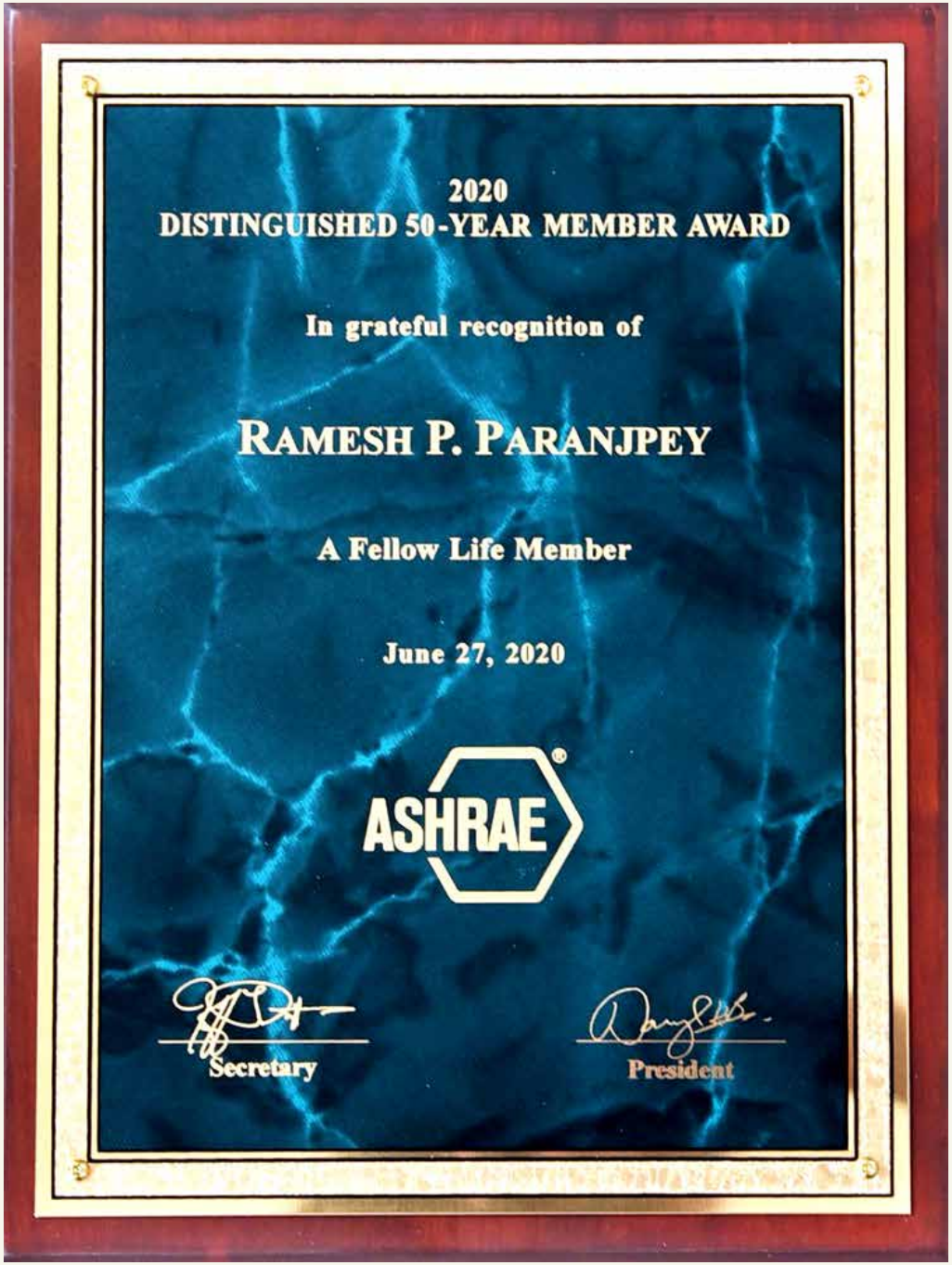
You are happily married to Smt. Manish who holds Zoology and Social Work post graduate degrees and is the motivation and support in your professional journey. You are blessed with two daughters, Manali is a dietician in Pune, and Neelima is a doctorate in Industrial Psychology working in the US.

For your immense contribution to disseminating knowledge to the engineering community through your exhaustive training programs and publications that have benefitted the industry immensely, and for your sustained commitment to ISHRAE and ASHRAE over several decades, **the National Conference on Refrigeration and Airconditioning 2022 feels privileged to honour you, Shri. Ramesh Paranjpey, with the 'DOYEN OF HVAC & R INDUSTRY' award on this 25th day of February 2022 at Guwahati.**

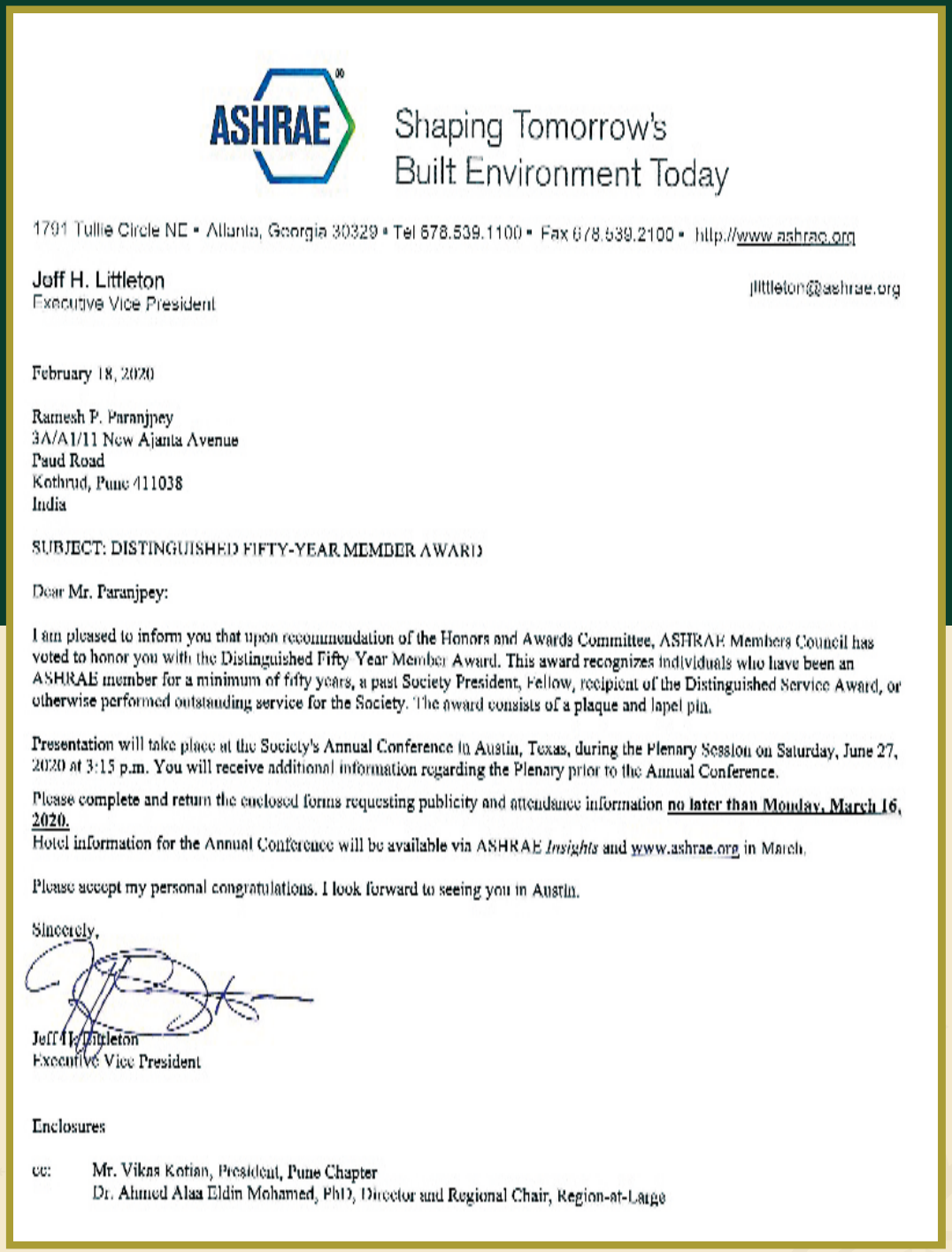
Prof. M P Maiya
Chairman – NCRAC 2022

S Sankaran
Chairman – Awards Committee

ASHRAE 2020


2020
DISTINGUISHED 50-YEAR MEMBER AWARD
In grateful recognition of
RAMESH P. PARANJPEY
A Fellow Life Member
June 27, 2020
ASHRAE
Secretary
President

50-Year MEMBER Award



ASHRAE

Shaping Tomorrow's Built Environment Today

1791 Tullie Circle NE • Atlanta, Georgia 30329 • Tel 678.539.1100 • Fax 678.539.2100 • http://www.ashrae.org

Joff H. Littleton
Executive Vice President
jlittleton@ashrae.org

February 18, 2020

Ramesh P. Paranjpey
3A/A1/11 New Ajanta Avenue
Paud Road
Kothrud, Pune 411038
India

SUBJECT: DISTINGUISHED FIFTY-YEAR MEMBER AWARD

Dear Mr. Paranjpey:

I am pleased to inform you that upon recommendation of the Honors and Awards Committee, ASHRAE Members Council has voted to honor you with the Distinguished Fifty Year Member Award. This award recognizes individuals who have been an ASHRAE member for a minimum of fifty years, a past Society President, Fellow, recipient of the Distinguished Service Award, or otherwise performed outstanding service for the Society. The award consists of a plaque and lapel pin.

Presentation will take place at the Society's Annual Conference in Austin, Texas, during the Plenary Session on Saturday, June 27, 2020 at 3:15 p.m. You will receive additional information regarding the Plenary prior to the Annual Conference.

Please complete and return the enclosed forms requesting publicity and attendance information **no later than Monday, March 16, 2020.**
Hotel information for the Annual Conference will be available via ASHRAE *Insights* and www.ashrae.org in March.

Please accept my personal congratulations. I look forward to seeing you in Austin.

Sincerely,

Jeff H. Littleton
Executive Vice President

Enclosures

cc: Mr. Vikas Kotian, President, Pune Chapter
Dr. Ahmed Alaa Eldin Mohamed, PhD, Director and Regional Chair, Region-at-Large

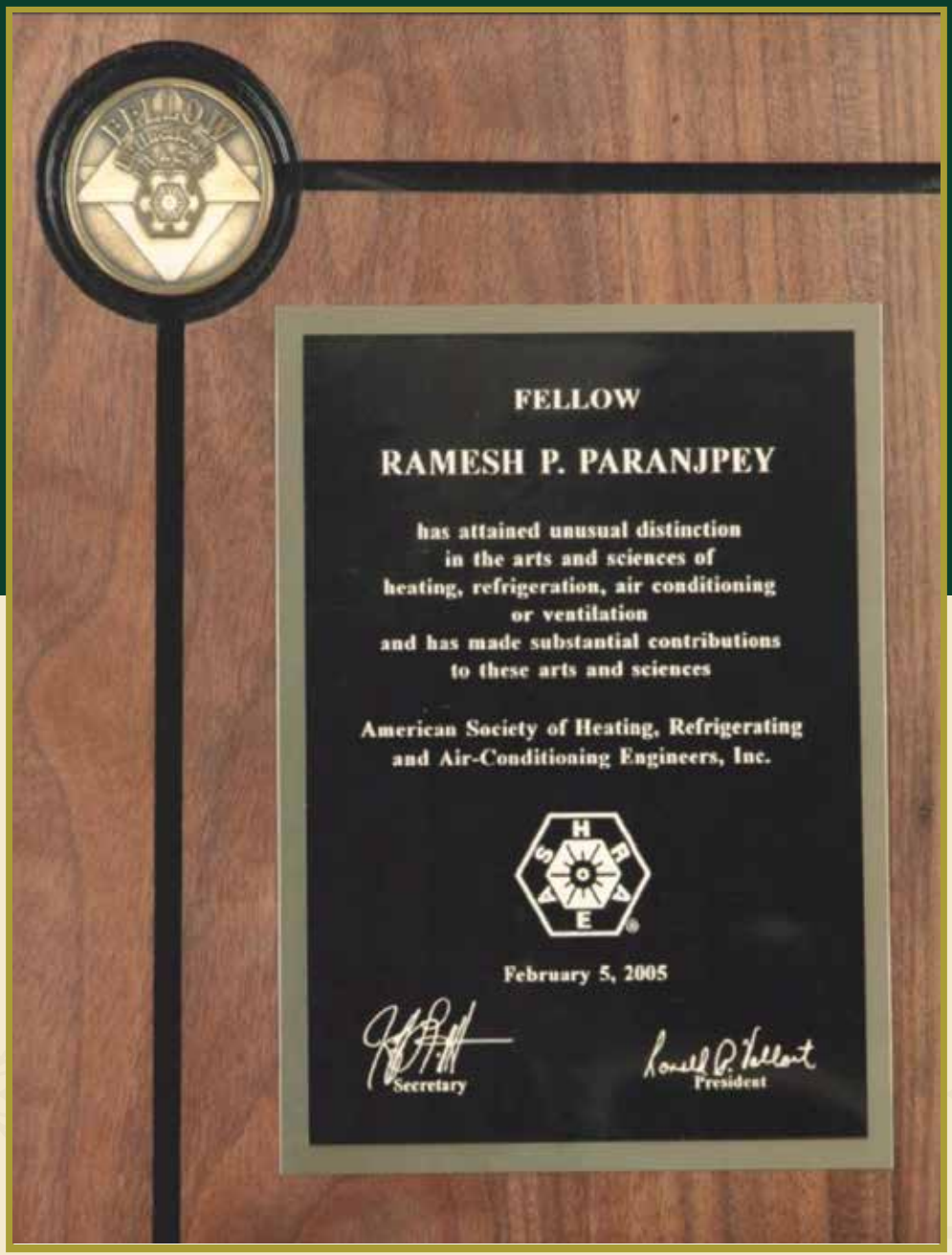
SAKAL TODAY,
13th February, Page-6

रमेश परांजपे यांना 'विशेष सेवा पुरस्कार'

पुणे, ता. १२ : 'अमेरिकन सोसायटी फॉर हिटिंग अँण्ड रेफ्रिजरेशन यांच्या तर्फे' एअर कंडिशनिंग आणि रेफ्रिजरेशन क्षेत्रातील रमेश परांजपे यांना 'विशेष सेवा पुरस्कार' देण्यात आला.

परांजपे यांनी किर्लोस्कर न्यूमटिक्स, कॅरिअर व्होल्टाज या कंपन्यांमधून महत्त्वाच्या पदावर काम केले आहे. गेली ५० वर्षे उल्लेखनीय सेवा केल्याबद्दल त्यांना हा पुरस्कार देण्यात आला. त्यांनी मुख्यतः फिशरीज, पेट्रोकेमिकल्स कंपन्या तसेच कोल्डस्टोरेज आणि इंडस्ट्रिअल प्रोसेस प्लॅट्समध्ये रेफ्रिजरेशनची कामे केली आहेत.

FELLOWSHIP AWARD



ASHRAE FELLOWSHIP AWARD
at ORLANDO - USA

BRY-AIR AWARD FOR BEST SYSTEM DESIGN-2009

ASHRAE

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June 2017

Dear 2017 *Fundamentals* contributor or Handbook Committee member:

Personalized copies of the 2017 *Fundamentals* I-P and SI editions have been sent to you in appreciation of all you did to help with the revision of this volume of the ASHRAE Handbook. This volume, the result of your efforts, will be used worldwide as an indispensable resource.

ASHRAE is fortunate to have the help of volunteers like you who are willing to spend the many hours required to do the work.

We are privileged to have worked with you in putting the book together.

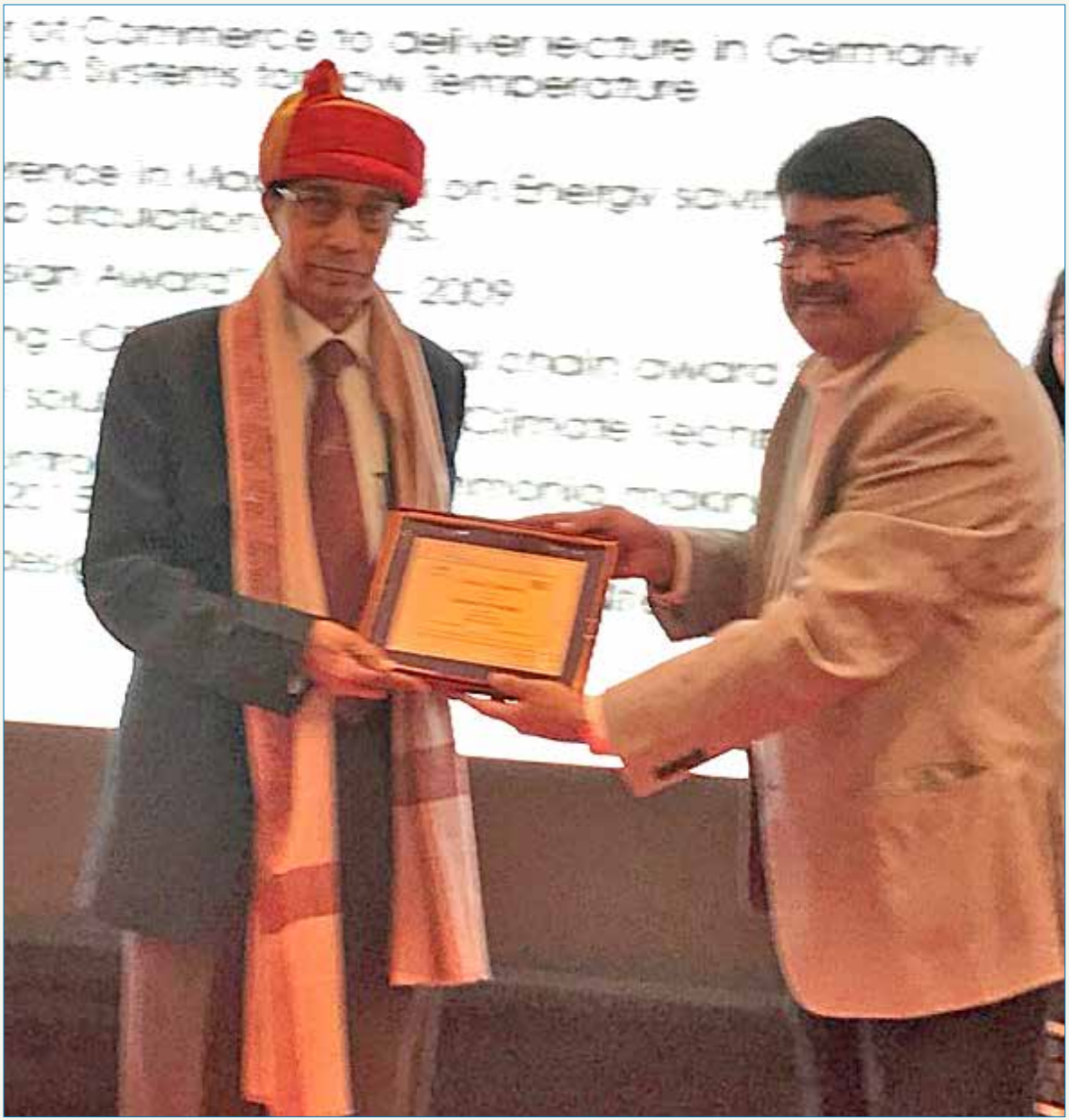
Thank you.

Mark S. Owen
Editor

Heather E. Kennedy
Managing Editor

Nancy F. Thysell
Typographer

ASHRAE/ISHRAE 50-year service award



Winner of Life Time Engineering - ICE/Danfoss/Global chain award 2012

Winner of Life Time Engineering - ICE/Danfoss/Global chain award 2012

Lifetime Engineering

Mr. Ramesh Paranjpey, Life time Member ASHRAE.

BEST HVAC&R ENGINEER AWARD-2022 SPONSORED BY IIT, ISHRAAE, ASHRAE-AT NATIONAL CONFERENCE OF RAC

H M Jhangiani Journal Paper Award

ISHRAE®

THE INDIAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS

H M Jhangiani Journal Paper Award

Presented to

P Ramesh Paranjpey

In recognition of your article on "'Carbon Dioxide as a Refrigerant in the Indian Context' (Sep-Oct 2021 issue of the Cold Chain).

Year 2022-23

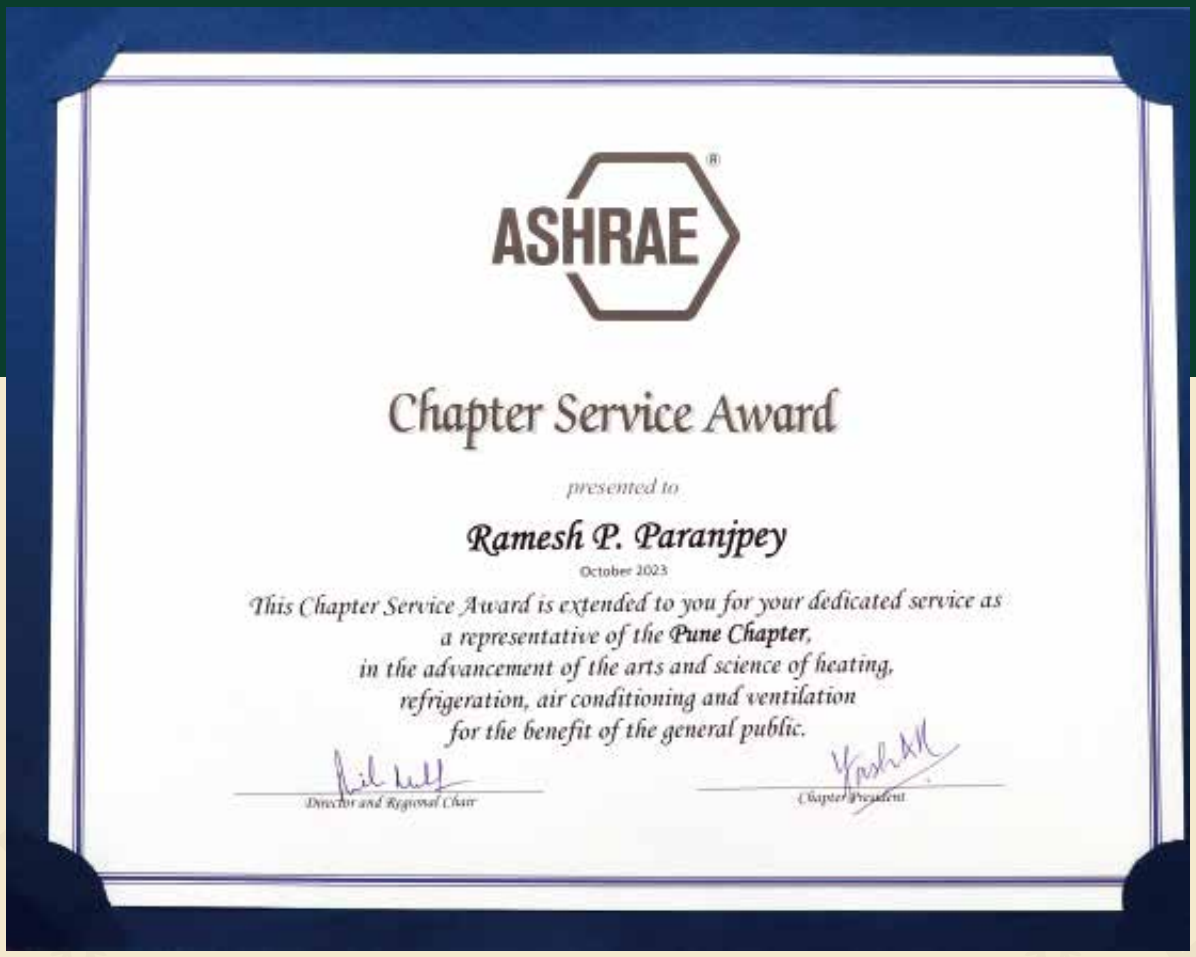
(N S Chandrasekar)
National President

(Pankaj Shah)
H&A Chair

(Anoop Ballaney)
National Secretary

ISHRAE Award

ASHRAE
Chapter Service Award 2023



ASHRAE

Chapter Service Award

presented to

Ramesh P. Paranjpey

October 2023

This Chapter Service Award is extended to you for your dedicated service as a representative of the ***Pune Chapter,*** *in the advancement of the arts and science of heating, refrigeration, air conditioning and ventilation for the benefit of the general public.*

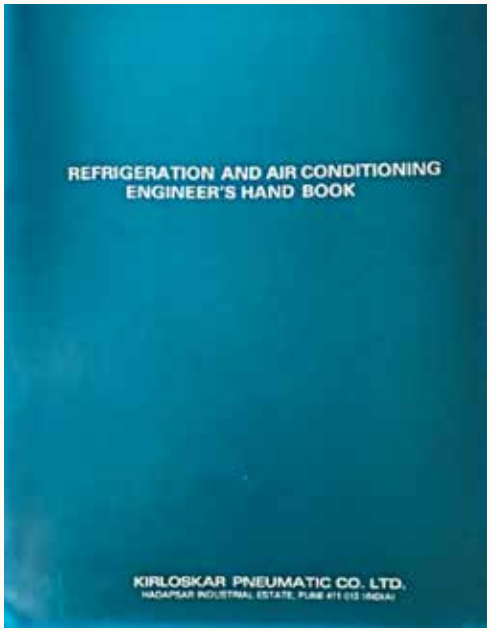
Director and Regional Chair

Chapter President

ISHRAE Exeptional Service Award 2023-24

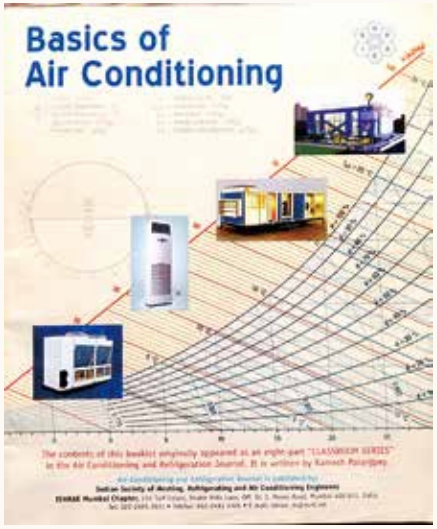
BOOKS PUBLISHED

1998



This handbook is a compilation of all the important information acquired for designing the Refrigeration systems. The various information by me during my tenure of 27 years in Kirloskar Pneumatic co. Ltd was converted in to this guide book. The book was compiled in July 1988 & was distributed to each individual working in the company so that it would be easier for him during designing as a ready reckoner, instead of individually searching for the required information. The Guide book became very popular and engineers are still using it. In those days there were no computers and hence soft copy is not available as it was prepared as a typed matter.

July 2002



For ISHRAE-8 Articles written by me published between July 2002 - June 2004 and then ISHRAE decided to publish the book in form in 2004. It covers following topics

1. Basics of Air conditioning-Part-I
2. Properties of air Part-II
3. Understanding Psychrometrics-Part III
4. Applied Psychrometrics-Part IV
5. Estimating cooling loads-Part V
6. Air distribution-part VI
7. Duct Designing-Part VII
8. Air to Air system, Air to water system
   All water system & unitary systems-Part VIII

2003-04

Seven Training programs for LG in Noida were conducted during 2003-04 Following topics were covered

1. Fan basics, fan laws
2. Ducting designing basics
3. Duct designing methods-Velocity reduction, Equal friction, static regain etc.
4. Plenum design, Grills and diffuser selection, noise reduction techniques
5. "Do's and Don'ts"

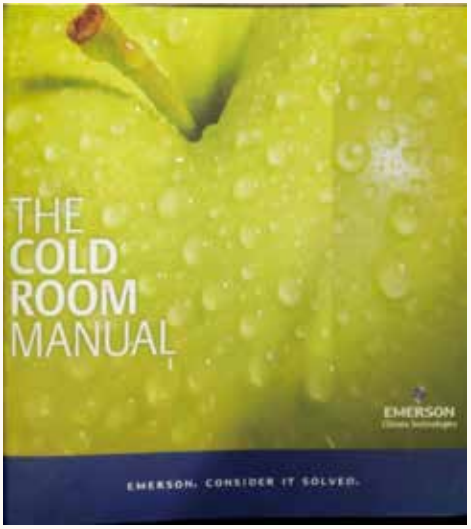
   This book was prepared by LG in February 2004 for their internal circulation.

February 2005

Training programs were conducted in Alfa Laval during 2005-This book was prepared by Alfa Laval for cold storage ammonia air coolers manufactured by them in their Sarole plant for their internal circulation. The manual covers the following topics

1. Introduction to ammonia refrigeration and key definitions
2. Conceptual knowledge of air coolers
3. Air cooler design fundamentals
4. LMTD, TDM, DT1 selection practices,
5. Blow through, draw through,, square, triangular pitch advantages/disadvantages
6. Selection of coils and fans based on psychrometric principles, fan laws
7. Defrosting methods
8. Trouble shooting guidelines
9. Data sheet and specification requirements

November 2011

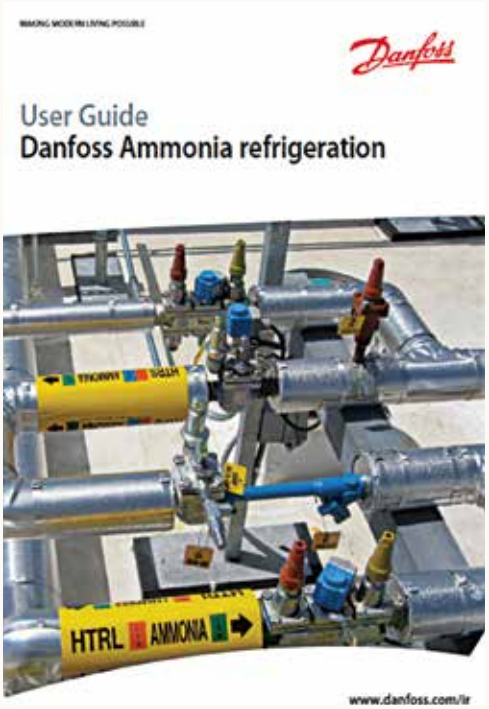


Training programs were conducted during 2004-2010 at various places in India for Emerson Climate Technologies on cold room design. Following topics were covered-

1. Introduction to cold room
2. Cold room design-insulation,size products
3. Heat load calculations
4. Installation and handling methods
5. Annexure-Product data, equipment selection.

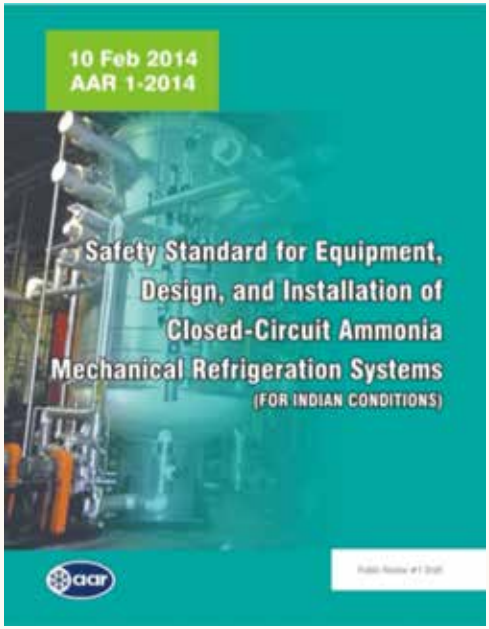
This booklet was prepared by Emerson in November 2011 for their internal circulation.

April 2015



Danfoss Denmark & India are specialized in Refrigeration controls. They have several options available and this guide book was prepared for Danfoss India after series of interactions with Denmark and Danfoss India engineers. The book was published in the year April 2015 for the internal circulation of Danfoss engineers, for their use. The book covers

Part-I	Ammonia refrigerant advantages, limitations, properties, various systems etc. components used
Part-II	Covers operational and safety controls
Part-III	Covers defrosting methods and controls used
Part-IV	Covers capacity control methods and controls used
Part-V	Covers controls used for cold storages for published NHB standard & pump circulation systems

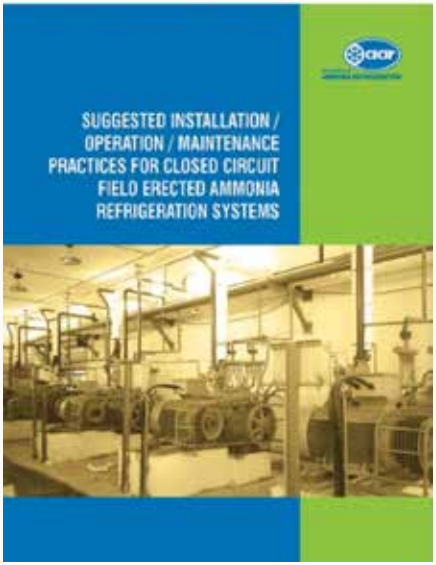


This standard was prepared for the Industry for Safety and correct design/Installation practices in February 2014. The Standard deals with ammonia refrigerant & covers following

Chapter-1	Purpose, scope and application
Chapter-2	Definitions of various terminologies
Chapter 3&4	Reference standards, & correct location of refrigeration machinery
Chapter-5	General system design requirements
Chapter 6&7	Machinery room and other area requirements
Chapter 8,9,10,11	compressors, pumps, evaporators, condensers
Chapter-12	Pressure vessel design, construction,testing
Chapter-13	Piping selection and installation
Chapter-14	Packaged systems & components
Chapter-15	Overpressure protection devices
Chpater-16	Instrumentation & Controls
Chapter-17	Ammonia detection and alarms

The standard is being used by BIS for preparation of BIS ammonia safety standard

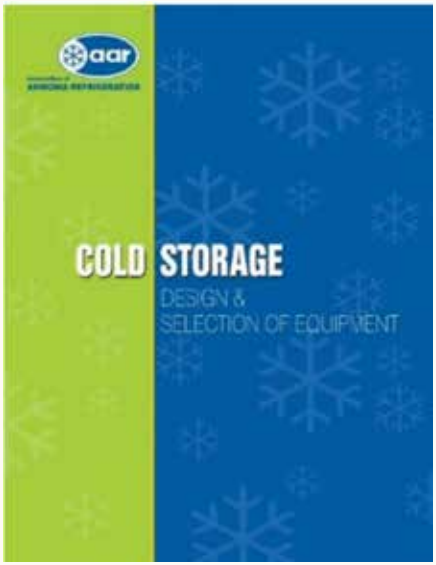
February 2016



This book was prepared for Association of in February 2016. The book covers following

Part-I	General information on Ammonia refrigerant
Part-II	Planning and Installation practices
Part-III	Pre commissioning activities
Part-IV	Starting and commissioning procedures for ammonia plants
Part-V	Operating & Maintenance Instructions
Part-VI	Maintenance
Part-VII	Precautions to avoid accidents
Part-VIII	Trouble shooting guidelines

November 2016



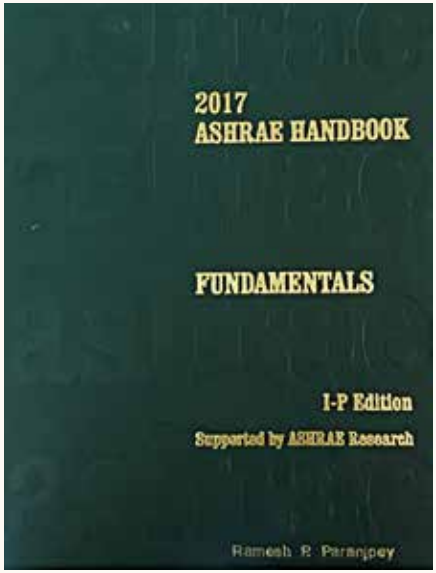
This book was written in November 2016 & covers following

Part-I	Cold storage load calculation with reference to NHB standard-01
Part-II	Selection of energy efficient equipment
Annexure-I	Heat transfer equations and conversions from FPS to SI
Annexure II	Product characteristics
Annexure III	Designing size & shape of cold storage
Annexure-IV	Insulation and vapour barrier
Annexure-V	Evaporation & product weight loss-importance of humidity
Annexure-VI	Air change load calculations
Annexure-VII	Product load calculations
Annexure-VIII	Problems related to cold storage
Annexure-IX	Case study-Potato load calculations

January 2018

This handout was prepared by to promote Ammonia Refrigerant in the year- January 2018

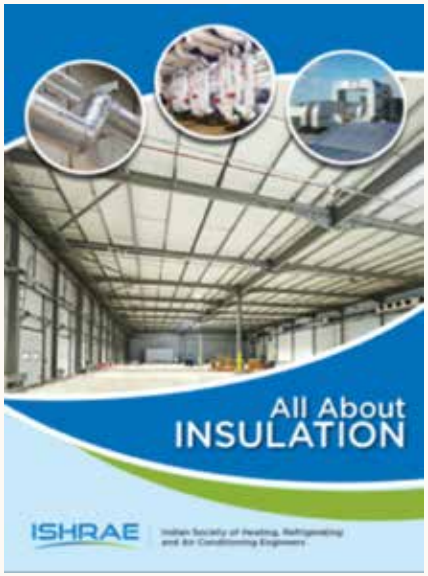
September 2017



ASHRAE publishes four volumes, mainly

- Fundamentals
- System & Equipment
- Refrigeration
- Applications
- Every 4th year one volume is updated with latest addition/information
- I was involved in a committee of four experts to update 2017 Fundamental volume, the other three experts were from the USA.
- Every 6 months meetings were held to review the contents and make necessary changes and approve them for publication
- I therefore was invited to visit the USA for 8 times in a span of four years to review updating with the team members

October 2020



PUBLISHED IN OCTOBER 2020 DURING REFCOLD
The book contains following

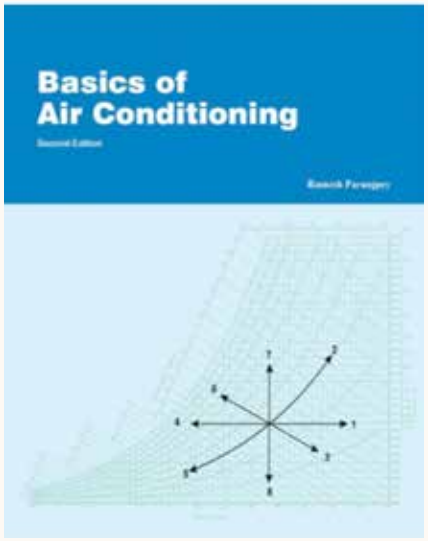
Part-1

Chapter 1	Basics of Insulation
Chapter 2	Important formulae and their calculations
Chapter 3	Properties of Insulation materials
Chapter 4	thickness calculations and requirements

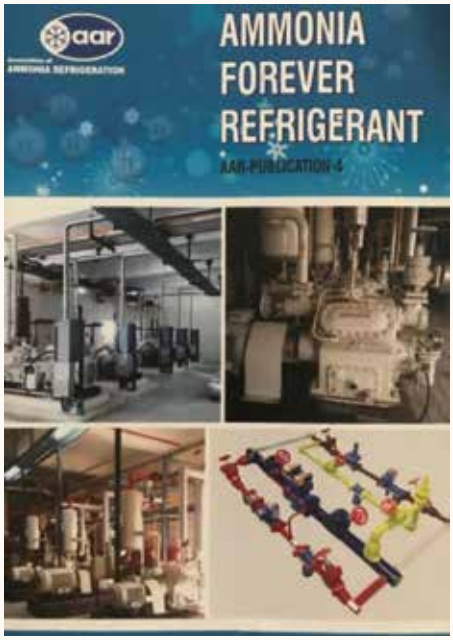
Part 2- Applications

Chapter 5	Cold storage Applications
Chapter 6	Industrial Applications
Chapter 7	Air Conditioning Applications
Chapter 8	Transport Refrigeration Applications

JULY 2021

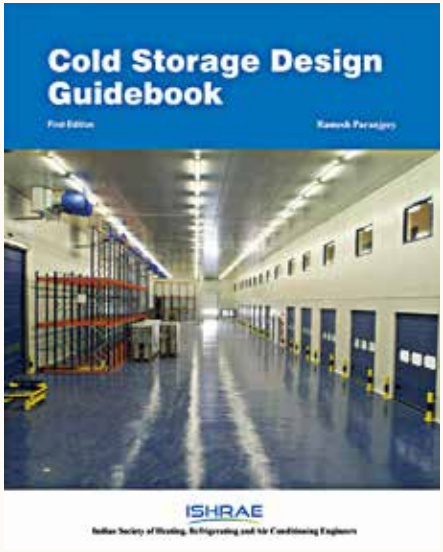


This book is a second edition of earlier publication released in July 2021, with additional information on,systems, VFD utilization, advance PLC controls and other important new applications like clean room designing etc. Following has also been added; Precision Air conditioning Roof air conditioners and package air conditioners



This book was released by AAR on 12th March 2022
The book contains following

Chapter 1	History of Ammonia as a refrigerant
Chapter 2	GWP,ODP and natural refrigerants
Chapter 3	Ammonia refrigerant properties and applications
Chapter 4	Advantages of Ammonia as a refrigerant
Chapter 5	Use of Ammonia refrigerant in air conditioning applications
Chapter 6	Ammonia refrigerant drawbacks and limitations
Chapter 7	Emergency response in case of leak
Chapter 8	Personal protection & Equipment
Chapter 9	Safety equipment for installation and emergency procedures
Chapter 10	Procedure for oil, water and air removal
Chapter-11	Ammonia leak and health hazards & response
Chapter 12	Recent trends and future technologies



Contains Following Chapters

1. Introduction
2. Heat load contributing factors
3. Commodity storage requirements
4. Construction of efficient and moisture proof cold storage
5. Load calculations for positive temperature applications
6. Load calculations for negative temperature applications
7. Energy efficient equipment selection
8. Refrigerant piping material & selection
9. Controls for cold storage plant
10. Operation & Maintenance practices for cold storage equipment
11. Hazard and operability study
12. Troubleshooting

ARTICLES

ARTICLES PUBLISHED IN ISHRAE JOURNAL

1	April-June 1999	Use of Ammonia for Air conditioning Applications
2	April - June 2003	Cooling coils -understanding the factors that influence their design and selection
3 to 10	July 2002 - April 2004	Basics of Air Conditioning-8 Articles-**8 Parts**
11	Jan - March 2004	Why compressors Fail
12	July - Sept 2004	Lubricating oil and tear down analysis of Reciprocating compressors
13	July - Sept 2005	Designing a cold storage and its Refrigeration system
14	April - June 2006	Some misconceptions about the refrigeration cycle
15 to 22	July 2007 - June 2009	Evaporators -**Eight Parts**
23	Jan - March 2009	Energy Saving-Ammonia Refrigeration applications using pump circulation
24	Jan - March 2010 Cold chain	Importance of vapour barrier in cold storage Design
25	July - Sept 2010 Cold chain	Common problems faced in Refrigerated Storages-Possible causes and likely solutions
26	Oct - Dec 2010 Cold chain	Pump circulation systems or gravity flooded systems-Advantages of pump circulation systems
27	Jan - March2011Cold chain	Designing for safety in Ammonia Refrigeration Plants-Part I
28	April - June 2011 Cold chain	Designing for safety in Ammonia Refrigeration Plants-Part-II
29	Oct - Dec 2011 Cold chain	Forced draft air coolers or bunker coils for cold storages

30	Nov - Dec 2013 Cold chain	U' turn accumulator-A new design concept
31 to 35	July 2013 - Dec 2014	Danfoss Ammonia Refrigeration controls user guide-**5 Parts**
36	Nov - Dec 2014 Cold chain	Potato cold storage load calculations as per NHB standard 01:2010
37 to 39	Nov 2015 - Aug 2016	Ammonia forced circulation Air cooler manual-**3 Articles**
40	Jun - 2017	Ammonia refrigerant for Air conditioning to the fore
41	January - 2018	Indian Refrigeration & cold chain Industry
42	March - 2018	Single stage, compound and booster systems and inter-sage cooling methods
43	October 2018	Recent trends In Refrigerants & Low charge Ammonia systems
44	May - June 2019	Safety equipment for Ammonia Installations and emergency procedures
45	Sept - Oct - 2019	Load calculations for cold rooms and process freezing plants
46	Nov - Dec - 2019	All About Insulation
47	Sept - Oct 2021	Carbon Dioxide as a Refrigerant in the Indian Context
48	March - April - 2022	Construction of energy efficient and moisture proof cold storage
49	Nov - Dec - 2022	Transport Refrigeration
50	May-June 2023	Refrigerant piping for field erected ammonia systems-Part-1
51	Sept - Oct 2023	Refrigerant piping for field erected ammonia systems-Part-2
52	Nov - Dec 2023	Maintenance Practices for Closed Circuit Field Erected Ammonia Refrigeration Systems
	Total Articles Published	**Forty-Nine (52)**

ARTICLES PUBLISHED IN OTHER JOURNALS/ SEMINARS

1	04-10-1969	Climate control journal	Testing of small capacity refrigeration compressors
2	1-12-1970	Climate control journal	Low temperature testing chamber using cascade refrigeration system
3	4-01-1982	Institute of Energy management-Indian refrigeration Journal	Choice of Refrigerant for refrigeration systems for Industrial process plants
4	21-08-1986	Govt. Of Maharashtra-Dapodi-Pune	Installation, start up, operation and maintenance of ACR systems
5	20-04-1989	Indo-US workshop, Ministry of Environment-Delhi	Screw compressors
7	28-07-1989	CSIR-NCL -Pune	Montreal protocol and its effects on Refrigeration Industry
7	July-Sept.-1996	Innovative ACR Journal	Training in HVAC
8	01-08-91	NCL -Pune	CFC substitute development for household refrigerators
9	22-04-1991	National Academy of Engineering-California-USA	Effect of ozone depletion issue on Indian Refrigeration Industry
10	12-03-1992	Indian copper development -Mumbai	Use of copper and copper alloy products in Refrigeration Industry

11	09-11-1992	Bhabha Atomic Research Center, Mumbai	Application of screw compressors in Industrial, petrochemical, and other related Industries
12	28-09-1992	Ministry of Science & Technology-Delhi	CFC substitutes and Technology development for ACR Industry
13	Jan - March 1993	Innovative ACR Journal	Application of screw compressors
14	06-03-1994	Bhabha Atomic -Mumbai	Advantages of screw compressor over reciprocating compressors
15	Jan - March 1997	Innovative ACR Journal	Industry driven approach can hasten CFC phase out in India
16	02-03-1997	ISHRAE -New Delhi	Transport air conditioning with special reference to Bus air conditioning
17	25-01-1998	Walchand College of Engineering. - Sangli	Bus Air conditioning
18	20-11-1998	TECHSEM-Mumbai	Recent trends in Refrigeration & Air conditioning
19	26-11-1998	Institution of Engineers-Mumbai	Applied psychrometrics
20	Jan - March 1999	Innovative ACR Journal	Recent trends in Refrigeration & Air conditioning
21	17-07-2001	Singhgad college of engineering-Pune	Car air conditioning systems-Expectations/limitations and emerging trends
22	26-09-2001	ACRECONF-Delhi	Mobile refrigeration vans-key Design/ construction issues
23	27-4-2002	National seminar on Emerging Technologies-ISHRAE-ASHRAE-Delhi	Transport Refrigeration

24	26-4-2003	ASHRAE -Western India-Pune	Challenging Encounters in trouble shooting of Refrigeration systems
25	16-06-2003	Bharati Vidyapeeth Pune	Refrigeration & Airconditioning--overview of basics
26	15-11-2003	ASHRAE Western India Chapter-Mumbai	Do's & don'ts for Refrigeration plants
27	28-1-2004	NCL Pune	Recent trends in ammonia Refrigeration
28	30-1-2004	I.I.T. Kharagpur	Mobile air conditioning
29	9-1-2005	COMFEX -Ahmedabad	Transportation Techniques for perishables
30	7-12-2007	ACRECONF Delhi	Liquid over-feed system design
31	24-9-2008	Nuremberg Germany-German chamber of commerce	Use of energy saving equipment & technologies in Ammonia refrigeration plants
32	15-2-2010	ACREX-Mumbai-Westin Hotel	Design of refrigeration plant using low temperature brines
33	14-4-2011	Macedonia-Ohrid	Energy saving in ammonia pump circulation systems
34	1-8-2012	Cooling India magazine	Advantage of Ammonia Refrigerant over HCFC/HC refrigerants
35	1-12-2012	Cooling India magazine	Defrosting of air coolers-various methods
36	Nov. - 2013	Cooling India magazine	Cold storage design-often overlooked aspects
37	1-2-2016	AAR News Letter-Pune	Refrigeration systems-single stage/two stage/cascade-booster and various interstage cooling methods

38	January -2017	Cooling India magazine	Terminologies in AC&R refrigeration
39	Nov. 2017	AAR news letter	Screw or reciprocating compressors- Indian scenario
40	Jan-March-2018	ICE magazine	Design of safe ammonia cold storage
41	Feb. -2019	Cooling India magazine	Challenging problems and easy solutions

THE DETAILS OF MAJOR TRAINING PROGRAMS CONDUCTED ARE AS UNDER

LOCATION	PERIOD	REMARKS
Carrier-Singapore	7th & 8th December 1995 3 Months course Jan to April 1996	Basic Air conditioning, Trouble shooting, Refrigeration cycle 10 modules covering GTAC I
Carrier –China	February 1996	Transport Air conditioning for Bus body builders and A/C system suppliers
Blue Star- Thane, Mumbai	Sept 1996, January 1997 August, Sept and October 2004	2 days training for fresh engineers at HRD centre. Ammonia refrigeration all India basis.
Voltas –Thane, Mumbai, Delhi, Chennai	Sept 2000 February 2001 August 2001 August 2004	General Training in A/C & R Duct design for ductable splits
NDDB –Anand	22nd / 23rd / 24th March 2001	3 days training for engineers from all over India having 20 years+ experience, on Ammonia refrigeration
Telco-Pune	August 1999 - Pimpari 11th/12th Dec. 2007 – Chinchwad	4 days full time training for engineers from various depts. like ERC, QA, materials, Production

ISHRAE-Pune	15th May to 7th August 1997 6th Oct 1997 to Feb 1998 18th June-Sept 1998 August 1999 to October 1999 Oct 2000 to Jan 2001	3 months program covering 12 modules for fresh/practicing engineers, Architects, etc conducted at Institution of Engineers, total more than 125 engineers have undergone training
ISHRAE –Mumbai	10/2/2000 & 11/2/2000 19th/20th/21st January 2002 5th/6th/7th September 2002 27th/28th/29th Dec 2004 17th/18th/19th Nov 2005 23rd/24th March 2007 15th Feb 2010	2 days programs for engineers at St. Xavier's College, covering one batch for design engineers and second for field personnel. More than 70 engineers participated Service training Refrigeration & air conditioning Work shop –ACREX Industrial process plant design
ISHRAE-Ahmedabad	19/6/1999 25/9/99 20th, 21st, 22nd July 2000 3th/4th/ Feb 2006	One day program on transport refrigeration, maintenance-trouble shooting & 3 days comprehensive training Two-day program
Govt. College of Engineering-Pune	2000 2001 2002 2003	Visiting professor for Graduate and post graduate students covering Air Conditioning and Refrigeration syllabus as also external examiner and paper setter

EMERSON NETWORK-Mumbai	28th-30thApril 2003 5th/6th April 2004 16th/17th/18th August 2006 10th/11th October 2006 15th/16th 2007 16th June 2007-Ghatkopar 9th/10th/11th July 2007 27th Feb t2008- Godrej CII -Vikhroli	3-day training for 15 engineers repeat for two days Psychrometric Refrigeration basics
Emerson Climate Technology-Pune	8th Sept 2007-Pune 18th September –Mumbai 12th Sept –Chandigarh 13th Sept –Delhi 11th Oct-Bangalore 12th October-Cochin 18th October – Chennai 19th October –Hyderabad 26th March 2008-Ahmedabad	Cold storage Design
Thermax Ltd. Mumbai	12th & 13th February 2004	Cooling Load, Psychrometric, Air-conditioning systems
LG Electronics Ltd Noida & Pune, Ranjangaon	16th & 17th March 2004 3rd/4th/5th March 2005 Dec 10th & 11th 2004 1st July 2005, 9th & 20th July	Cooling Load, Duct Design, Trouble shooting Cooling Load, Duct Design, psychrometric Duct Design
Kenstar Appliances, Aurangabad	26th July 2004	General training, window and split air conditioners

Air control (ACCEL), Ahmedabad	24th/25th/26th August 2004	Factory engineers, on compressors, selection, trouble shooting, installation
ALFA LAVAL LTD. PUNE Sarole plant	18th/19th/20th August 2005 20th/21st April 2010	Refrigeration basics, P & H diagram, compressors/heat exchangers/ expansion valves Cold storage design
National Institute of Construction Management and Research	8th/9th & 13th September 2005 Oct / November 2007 Jan / Feb March 2008	Air conditioning from Architectural view point, installation, ducting, cooling load, energy efficient designs
Sinhagad College of Engineering Pune	8th and 10th November 2005	Mobile air conditioning and Ammonia refrigeration
Bry –Air Learning Institute	28th-29th April 2006- Delhi 21st-22nd June 2006-Bangalore 27th-28th June 2006-Mumbai 19th-20th July 2006-Pune 20th-21st Sept 2001 Bangalore 24th-25th October 2007-Mumbai 20th Nov 2007 Chennai 13th/14th June 2008 Mumbai	Psychrometric Blue Star Engineers Blue Star
ETA – Chennai	5th & 6th August 2006	Psychrometric
Chemtrols –Goa	4th & 5th September 2006	Refrigeration & air conditioning Basics

Satyam Computers-Hydrabad	7th/8th/9th Feb 2006	Air conditioning
R.S. Kulkarni Consultants	10/17/31st March 2007 7th/14th/21st/28th April & May	Refrigeration & Air conditioning
Kirloskar Chillers Hadapsar	23rd/24th July 2007 13th/14th August 2008	P & H diagram, psychrometric
Aerience-Pune	2nd/3rd June 2008 14th/15th July 2008 22nd/23rd August 2008 10th/11th Nov 2008 27th November 2008 2nd/3rd/ 9th/10th February 2009 6th March 2009 4th April 2009 6th 7 8th October 2009 8th Nov 2009 3rd/6th May 2010 14th June 2010	Ref. basics & Air conditioning Cooling load calculations Mather & Platt engineers Mather & Platt engineers
Munters India Humidity Control Pvt. Ltd.-Pune	8th September 2009 5th May 2010	Psychrometric
General Motors-Talegaon	18th/19th Nov 2009	Car Air con design
ASHRAE –Pune	12th-13th Dec 2009	Psychrometric/cooling load
Honeywell Automation-Pune	2001	Four sessions on Air conditioning

LECTURES DELIVERED AT VARIOUS FORUMS

The Institute of energy management-Bombay	5th & 6th September 1983	Choice of refrigerant for refrigeration systems for industrial process plants-Won first price
Industrial Safety & Research association -Pune	30th June 1984	Air Conditioning systems for factory environment
National Academy of Engineering, California -USA	22th-25th April 1991	CFC phase out and India's current position
Indian Copper Development center	12th March 1992	Use of coper & copper alloy products in Refrigeration Industry
Cold storage owner's Association -Lucknow	17th October 1992	Design of Efficient Refrigeration system for cold storages
Ministry of Environment & Forests	31st March 1993	CFC phase out and its impact on AC& R Industry
Carrier Transicold Singapore	7th-8th December 1995	Simple Refrigeration cycle, General product Introduction
Management Advisors & Consultants -Pune, Hotel Shantai	15th-16th July 1996	Application of various systems 7 selection of equipment for Mobile Air conditioning
ACREX 97	2nd March 1997	Transport Air conditioning & Refrigeration

Walchand College of Engineering -Sangli	25th January 1998	Bus Airconditioning
I.I.T. Powai-Mumbai	10th February 1999	Compressors for Refrigeration & Air Conditioning systems
National Chemical laboratory-Pune	19th July 2000	Mobile Airconditioning
Army Institute of Technology-Dighi-Pune	15th September 2000	Mobile air conditioning
Vishwakarma institute of Technology	21st March 2002	Career Opportunities in HVAC&R
College of Engineering -COEP -Pune	22nd March 2002	Refrigeration system balancing
Sinhagad College of Engineering Pune	8th and 10th November 2005	Mobile air conditioning and Ammonia refrigeration
Chemtrols –Goa	4th & 5th September 2006	Refrigeration & air conditioning Basics
Satyam Computers-Hyderabad	7th/8th/9th Feb 2006	Air conditioning
R.S. Kulkarni Consultants	10th/17th/31st March 2007 7th/14th/21st/28th April & May	Refrigeration & Air conditioning

Kirloskar Chillers Hadapsar	23rd/24th July 2007 13th/14th August 2008	P & H diagram, psychrometric
Munters India Humidity Control Pvt. Ltd.-Pune	8th September 2009 5th May 2010	Psychrometric
General Motors-Talegaon	18th/19th Nov 2009	Car Air con design
ASHRAE –Pune	12th-13th Dec 2009	Psychrometric/cooling load
Honeywell Automation-Pune	2011	5 lectures on design of air conditioning systems
National Horticulture Board -new Delhi	2010-2011, 2012	Training on cold storage design 3 lectures one per year
ACREX -2013 Mumbai	9th March 2013	Safe Design, construction and maintenance of Ammonia plants
ACRECONF 2016	19th March 2016	Ammonia pump circulation systems
Pimpri Chinchwad college of Engineering	3rd July 2017	Applied Psychrometric
ASHRAE Pune Chapter-	27th October 2017	Use of Standards for designing Ammonia refrigeration plants
I.I.T. Chennai	18th October 2018	Low charge Ammonia systems
PARC-ASHRAE Pune	16th November 2018	Importance of natural refrigerants in air conditioning and recent trends

Symbiosis Institute of International Business-Pune	17th December 2018	Energy efficiency with different refrigerants in AC&R systems
Smt. Kasturbai Navale college of engineering. -Pune	20th February-2019	Latest trends in HVAC&R
RACON-ISHRAE Kolkata	7th December 2019	Environmentally friendly refrigerant-Ammonia
ISHRAE Jaipur	2nd July 2020	Natural refrigerants and their use in HVAC&R
REFTECH-5.0	26th June 2021	Safety Precautions while designing, operating and maintaining the refrigeration plants
ISHRAE Madurai Chapter	30th July 2021-Webinar	Cold storage Design Basics
REFCOLD	18th December 2021-Web presentation	Identification of Digitization Opportunities in Refrigeration
ISHRAE WEBINAR	3rd July to 14th August 2022	Seven lectures on use of Ammonia Refrigerant
ISHRAE Sangli	27-12-2022	How to construct energy efficient and moisture proof cold storage

SOME OF THE MOST IMPORTANT PROJECTS DESIGNED WHILE WORKING IN KIRLOSKAR PNEUMATIC

Sr. No.	Client	Project description
1	Indian Petrochemicals corporation -Baroda	India's largest Refrigeration plant, 2200TR using 32 No. 12 cylinder single and two stage compressors, -27°C temperature, with ammonia refrigerant, EIL consultants -using ASME/TEMA/API standards
2	Tuticorin Alkalis and Chemicals, Madras	900TR brine chilling plant at -20°C using 6 No. 12 cylinder compressors
3	Hindustan organic chemicals, Rasayani	400TR chilled water &180 TR brine chilling plant at -19°C using 6 no. 12 cylinder two stage compressors using ammonia refrigerant
4	Madras Refinery	236TR Brine chilling for paraffin Wax project using 2 No 9-cylinder compressors to cool MIBK solution up to +4°C using Ammonia refrigerant
5	Dunlop India Calcutta/madras	Water chilling plants with Ammonia refrigerant using 4 no. 9 cylinder single stage compressors, direct driven
6	Bayer India Thane, Mumbai	4x80 TR plants at -35°C using Methanol water brine using Ammonia refrigerant and 4 No. 9 cylinder compressors
7	Atic Industries Valsad	130 Ton flake ice plant, 175 TR chilled water plant, using 6 3-cylinder single stage compressors with ammonia refrigerant
8	Reliance	1200 ton & 450-ton chilled water plants using 2 No. Centrifugal compressors 3 No 6-cylinder reciprocating compressors

9	Gwalior Rayon, Thailand, Korea, Nagda, Harihar	Brine and water chilling plants of various capacities using Ammonia reciprocating compressors
10	Park Davis , Bombay	-60°C Methylene chloride brine chilling plants
11	Hindustan Aeronautics, Nasik	Test Chamber at minus 60^0C for testing hydraulic components of MIG aircraft
12	Armament Research & Development Establishment, Pashan, Pune	Low Temperature chamber for storing High Explosives
13	R & D dighi, Pune	Low temperature, high altitude testing chamber at minus 40°C for testing vehicle engine performance
14	Naval Dock yard Mumbai	Chilled water plant working on sea water for use on submarines when they come to dock yard
15	Chilled water plants	Bhabha Atomic Research Center, Trombay, Heavy water project, Kota. Reactor research center, Kalpakkam etc.
16	Concrete cooling for Dams construction	Flake ice and chilled water plants at Koyna dam, Supa dam, Narmada Dam, Totladoh dam, Beas Sutlaj link project. Tattihalli dam etc.
17	Hindustan Shipyard, chowgule steam ship	Cold storages on ships for working at two different temperatures, minus 20°C while carrying meat and +12°C while carrying banana-5 cargo ships provided with this facility
18	Refrigeration plants for Pharmaceuticals	Glaxo laboratories, IDPL, Hindustan Antibiotics, Lupin laboratories, Ranbaxy, Alembic Chemicals etc.
19	Refrigeration plants for Chemical & dyestuff Industry	Indian dyestuff, Bayer India, J K synthetics, Garware Nylon, Sudarshan chemicals, etc.
20	Ice plants & cold storages	Chitale bandhu, Koregaon cold storage, Brooke Bond, Aurangabad, NDDB, Hindustan Lever-Nasik Etc.

TOPICS OF LECTURERS DELIVERED AT VARIOUS SEMINARS

1. Future trends in Industrial Refrigeration & Air conditioning
2. Advances in Refrigeration Technology
3. How to construct energy efficient and moisture proof cold storage
4. Evaporators for modern cold chain infrastructure
5. Design of heat exchangers & pressure vessels in ammonia plants
6. Various types of compressors and their salient features
7. Evaporators & condensers for ammonia Refrigeration
8. Selection and Installation of ammonia piping for field erected systems
9. Design & Construction of food processing plants
10. Cold storage planning, construction & general precautions
11. Transport refrigeration
12. Pressure-Enthalpy diagram study (P-H diagram)
13. Do's and Don'ts in Ammonia Refrigeration plants
14. Ammonia refrigerant advantages
15. Cold storage design
16. Digitization of Industrial Refrigeration & cold chain
17. Cold storage load estimating
18. Ammonia piping with hot gas defrost arrangement
19. All about insulation
20. Natural refrigerants and their use in air conditioning
21. Safety in designing and operating Ammonia systems
22. Ammonia force feed pump circulation systems
23. Why promote natural refrigerants
24. Ammonia refrigerant advantages & drawbacks
25. How to select proper compressor for the refrigeration application
26. Energy efficient refrigeration in Dairy industry
27. How to build safe ammonia refrigeration plant
28. Why my cold storage consumes more power
29. Advances in compressors, condenser & evaporator technology
30. Efficient refrigeration system design

31. Various types of refrigeration systems
32. Low charge ammonia refrigeration system
33. Psychrometry
34. Design of fish processing plant & is modernization
35. Compressor selection reciprocating or screw?
36. Nuremberg Germany presentation-Energy saving equipment 7 technology used in ammonia pump circulation systems
37. Air conditioning basics
38. Career opportunities in AC&R
39. Ammonia CO2 cascade systems
40. Energy conservation in Refrigeration & air conditioning
41. Air conditioner & Refrigerator-How they work
42. Various refrigerants and their advantages/disadvantages
43. HVAC system performance achievement
44. Air conditioning cooling load calculations
45. Load calculations for positive & negative temperature cold storages
46. Single stage, two stage & cascade refrigeration systems
47. Understanding Refrigeration cycle
48. Cooling coil designing
49. Refrigeration basics
50. Air conditioning basics
51. Automobile air conditioning
52. Best practices in handling ammonia refrigeration systems
53. Refrigerant charging and Reclamation
54. System dehydration
55. Air Duct designing
56. Marine Refrigeration
57. Effects of ECBC code on air conditioning system design
58. Cold storage design-often overlooked facts
59. Troubleshooting in refrigeration system
60. Brine circulation system design using shell and tube evaporator
61. Refrigeration systems-various controls and Instruments

PROJECTS DESIGNED AFTER THE RETIREMENT IN 2003

1	Axis Agro Talegaon, Near Pune	Blast freezer-1Ton-1 No. IQF-1000kg/hr Cold storage-3rooms-20C Cold storage-3rooms+2c Precooling 5rooms-+22C Chilled water-7°C	3No two stage 4-cylinder compressors with 60kw motors
2	Blue fin Frozen foods, Taloja	5Ton Blast Freezer-3 No 900kg/hr Pate Frezers-2 No. IQF-500kg/hr-1 No. 2500kg/hr max--18hrs-45Ton/day 10TPD flake ice -2No.	9- cylinder two stage 4 compressors with 110kW motors
3	Corlim Fisheries Goa	3Ton/batch Blast freezers-3 No. Plate Freezers-12Ton/day x2 No. Chilled water plant 4cu.m/hrx2 chilled water plant 13cu.m/hrx2 Tube ice plant-30TPD -1 No, Flake ice plnt-20TPD-1 No. IQF -Glori-Vietnam-750kg/hr-1 No.	KCX72,,950 RPM-110kW motor-3 No. KCX4, 800RPM 90kW motor, KCX6,850RPM 132kW motor KCX6 850 RPM 132kW motos Howden screw compressor -225kW motor

4	Forstar, Taloja	Trolley Freezer 3Ton each -3 No. 600kg/hr Plate Freezer-1Ton/24hrs -2No. IQF-750kg/hr Spiral Freezer 500kg/hr 40TPD tube ice plant-1 No. 15 TPD flake ice plant-2NO.	KC72 , system 'C' 800R PM-5No 110kW motors
5	Gadre Marine-Ratnagiri	Surimi Plate freezer plant -3.5 Ton/day	KC93,650RPM, sysstem'C'-4 Nox132kW motors
6	Libran sea foods, Taloja	IQF-500kg/hr Blast freezer-102kW Plate freezer-77kW Chilled water 4000l/hr, 32 to 2°. C-140kw	KC63 system 'D' 800RPM-110kW motor1 No. KC51 750RPM system "D'-60kW 1No motor KC3750 RPM-60kW motor KC2-750RPM 55kW motor KC31,850, system 'A'-55kW3No motors
7	Packwell craft, Taloja	Cold storage has 8 cold rooms designed for fresh products at +ve temperatures up to +30°C also at negative temperature of -20°C of frozen products.	KCX3-2 No with 75kw motors & KCX 31 with 55kW motors
8	PD shah-	4673M ton cold storage-14rooms, -20°C	KC42-3No, ,750RPM,-,system 'D' -75kW motors
9	Seepra-Nasik	500Ton/hr IQF for sweet corn Kernel	Howden WRV321-132--1 No with 550kW 2 pole HT motor
10	Silver star exports-Porbandar-	72Ton freezing fish /day-6 plate freezer-1Ton each	KC72, sys'A'850 RPM, x4-75kW motor

11	Sonia Fisheries-Taloja fish freezing	Trolley freezer-4.25Ton each93W+1S) 38.25Mton/day, Plate freezer-1Ton each-3 No-90minute cycle	High stage J& E Hall mono screw--13.5/-+40-2 NO.110kW 2 pole motors, Low stage Hall mono screw compressors -2No.with 75kW motors
12	Sanjog cold storage-Varade, Karad, Satara	3rooms+3 C temp 630MT each-16.5x10.3x11.6m 3 rooms -20deg c 630MT each-16.5x10.3x11.6m	KCX2,650RPM, ,2NO 37kW motors KCX21,800RPM, - 2No 37kW motors
13	VKM Foods-MIDC Taloja	700kg/hr IQF,1 Ton plate freezer+2 blast 5 Ton eaach Tube ice -10Tonx2 No.	KC72(3W+1S) +40/-40 C,900RPM, closed cooler 123.2kw, consumimg74kW, KC3 with 75kW motor
14	VKM Foods-Nerul	Blast freezer 5Ton &3 Ton,2 Plate freezers 750kg/hr Tube ice plant 20TPD-1No	2KC72, 1000RPM + 1KC31, 100RPM, closed cooler 110kW motor, KCX3, 750 RPM, 55kW motor
15	Sanchita Marine -Plant 1 Sanchita-Plant 2	500kg/hr IQF Marel make Chilled water plant6000L/hr. at 2 deg. C IQF 750kg/hr-Foodtech Cochin	KC72,850RPM,90kw motor KCX3,900RPM-75kw motor KC72,1000RPM,2 No 110kW motor
16	Gadre Marine -Chorwad	spiral freezers, IQF	
17	Gadre Marine Mangalore	15 plate freezers, 3 ice makers, fisheries plant, water chiller	

Jan Palbhar Mhanatil Haay Haay Lyrics

जन पळभर म्हणतिल, 'हाय हाय!'
मी जाता राहिल कार्य काय?

सूर्य तळपतिल, चंद्र झळकतिल;
तारे अपुला क्रम आचरतिल,
असेच वारे पुढे वाहतिल,
होईल काहि का अंतराय?

मेघ वर्षतिल, शेते पिकतिल,
गर्वाने या नद्या वाहतिल
कुणा काळजी की न उमटतिल,
पुन्हा तटावर हेच पाय?

सखेसोयरे डोळे पुसतिल,
पुन्हा आपुल्या कामिं लागतिल
उठतिल, बसतिल, हसुनि खिदळतिल
मी जाता त्यांचे काय जाय?

अशा जगास्तव काय कुढावे!
मोहिं कुणाच्या का गुंतावे?
हरिद्वता का विन्मुख व्हावे?
का जिरवु नये शांतीत काय?