



SAFETY BULLETIN 31/22

AIGA KEY SAFETY PERFORMANCE FOR 2021 AND TRENDS SINCE 2017

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Acknowledgement

The information is based on the quarterly safety data shared voluntarily by all members of Asia Industrial Gases Association and the subsequent analysis carried out by Safety Advisory Group. AIGA thanks all its' members for sharing the data.

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Key Safety Metrics for all AIGA Members:

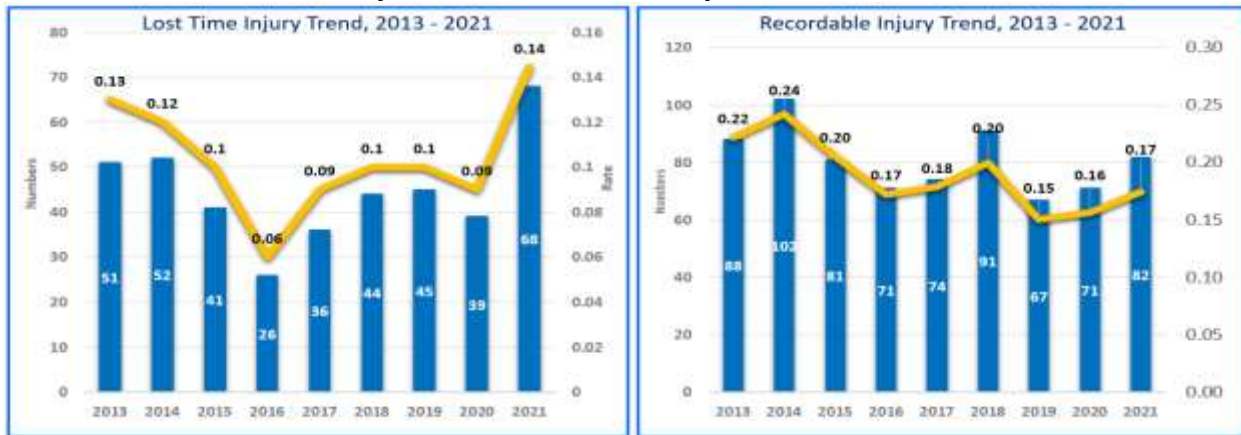
	1Q 2020	2Q 2020	3Q 2020	4Q 2020	2020 Full Year	1Q 2021	2Q 2021	3Q 2021	4Q 2021	2021 Full Year
Recordable Incident Rate	0.04	0.21	0.18	0.19	0.16	0.18	0.18	0.16	0.18	0.17
Lost Time Incident Rate	0.03	0.13	0.09	0.10	0.09	0.10	0.28	0.11	0.08	0.14
# of Fatalities	0	1**	1**	0	2**	2**	0	0	1**	3**

- ✚ Significant rise in Lost Time injuries in 2021 compared to 2020. Injuries due to slips, trips & falls and manual handling of cylinders/portable liquid containers are some of the major contributors
- ✚ No significant change in recordable injuries
- ✚ Zero permanent employee fatality but 2-3 Contractors' employee fatalities still happened

Note: (1) Recordable/Lost Time Incident Rates are numbers of injuries per 200,000 man hours. Ref to AIGA 042 for details.

(2)**fatality numbers are for contractors

Lost Time and Recordable Injuries Trends over last 5 years:



Things to Focus in 2022 to Improve Lost Time and Recordable Injury Trends:

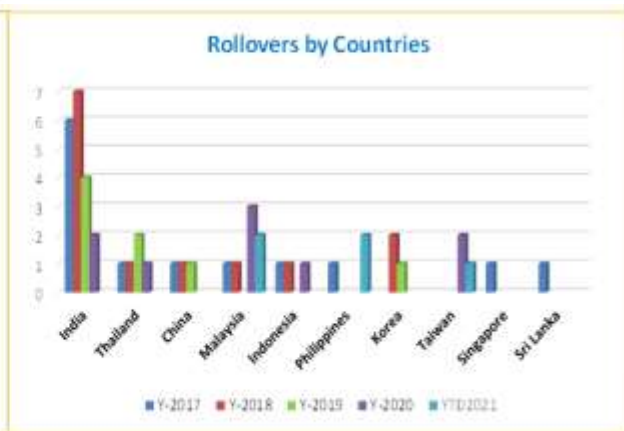
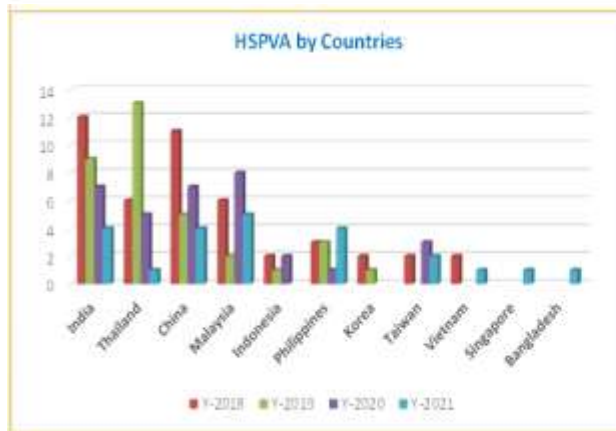
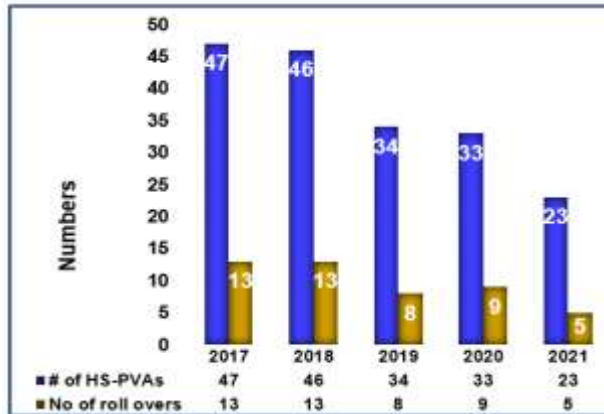
- Refresh awareness on prevention of injuries due to slips, trips and fall
- Safety in cylinder handling and loading/unloading
- Strengthen safety focus in Customer Engineering Services and Installations

Transport Safety Key Metrics:

	2017	2018	2019	2020	2021
Number of Product Vehicle Accident(PVA)	382	420	572	509	583
PVA Rate	0.83	0.84	1.5	1.38	1.55
Number of High Severity PVA(HS-PVA)	47	46	34	33	23
HS-PVA Rate	0.12	0.11	0.09	0.09	0.06
Number of Roll Overs	13	13	8	9	5
Roll Over Rate	0.03	0.02	0.02	0.02	0.01
# of fatalities - employees & Contractors	3	0	1	2	1
# of fatalities for 3rd party road users	15	9	8	6	5

- ✚ Lowest number of Rollovers and HSPVAs in 2021 over last five years
- ✚ YoY improvement in all Key Metrics viz HS-PVAs, Roll Overs and 3rd Party Fatalities
- ✚ Significant reduction in fatalities of 3rd party road users including two wheeler riders
- ✚ Lowest Ever Rollover rate and HSPVA rate in 2021 in last five years

Note: Product Vehicle Accidents (PVA) Rate is number of incidents per 100,000 KMs of travel. Ref to AIGA 042 for details



- ✚ Significant improvement achieved by a number of countries in Asia
- ✚ Top 3 three reasons for HSPVAs and rollovers found to be driver fatigue & distraction, lack of application of defensive driving and excessive speed

What worked well in favor of product vehicle safety improvement:

- ✚ Strong Senior Management focus at member companies and transporters
- ✚ Use of advanced technologies by all AIGA members and transporters
- ✚ Enhanced focus on human behaviour on Safety for drivers
 - More and more drivers started accepting the new technologies and advanced training
 - Use of short video clips for driver training and/or for conveying a message
 - Effective driver reward & punishment system based on Safety metrics
- ✚ Hands on roll over prevention training
- ✚ Strong focus on driver fatigue and distraction management by member companies
- ✚ AIGA playing a key facilitators' role with useful publications, data analysis, webinars, training packages, sharing of best practice by members etc

Challenges/Focus for the future in improving transport safety:

- ✚ To stay focused and not get complacent
- ✚ Mitigate the risks of high driver turn over
- ✚ Manage the pressure from Pandemic and other distractions
- ✚ Sustain the momentum / Continue all the good programs by AIGA & NAs
- ✚ Embrace use of digital tools/hand held devices in driver training and safety monitoring
- ✚ Focus more on human behaviour in driving safety
- ✚ Effective use of Emerging Technologies