



irata
International
Industrial Rope Access
Trade Association

Work and Safety Analysis 2010

ANALYSIS OF IRATA EMPLOYMENT AND SAFETY STATISTICS FOR 2010

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1. INTRODUCTION

This report summarises employment and accident/incident data submitted by member companies to the Industrial Rope Access Trade Association (IRATA) during the period Jan-Dec 2010. Members submitted two sets of reports:

- Quarterly employment figures, including working hours and
- Details of specific incidents or accidents for each event or person injured.

Both sets of data are essential in order to calculate accident/incident rates.

Member companies were not identified to the analyst. All data supplied was subject to quality checks prior to analysis.

Throughout the report, reference is made to a number of words and phrases that have the following meanings:

'On Rope' – Arranging, using and directly involved in rope access work.

- 'Off Rope' – work at height but not involving rope access, such as on scaffolds, roof work, provision of 'remote' support to rope access teams and un-rope (e.g. communications etc).
- 'On Ground' – working on site on level and secure surfaces; not involved in either of the above.
- 'Other' – typically, work off-site, in offices, classrooms etc.
- 'Accident' is used for incidents where actual harm or injury occurs.
- 'Incident' is used when no personal harm or injury results.

This report is arranged with figures and graphs incorporated within the text to which they apply. Tables, summarising employment and accident/incident data since 1989, are also included at the back of the report.

The report first considers overall employment figures, and then examines the accident and incident data before finally comparing IRATA incident rates with those of previous years and other industries.

2. IRATA COMPANY MEMBERSHIP

The total number of companies registered to Dec 2010 was 184, a further increase of 14 over the 170 total for 2009. The maintenance of a steady year on year increase since 2000 is shown by the graph (Fig.1).

Given the economic situation worldwide, this must be a very welcome continuing trend for the Association.

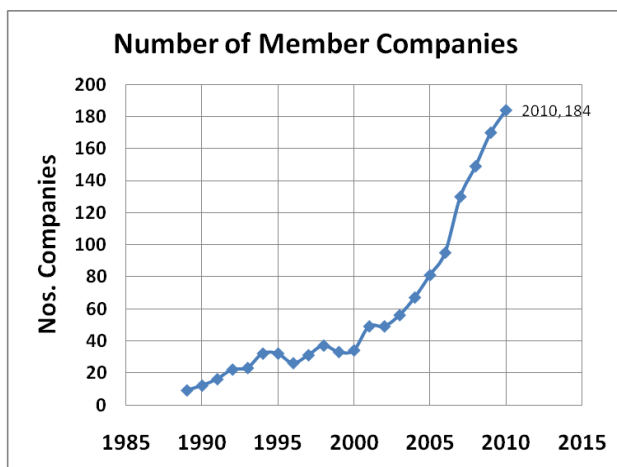


Figure 1 – Number of Member Companies

3. EMPLOYMENT STATISTICS FOR 2010

3.1 Overall Employment and Hours Worked

Commensurate with the increase in membership, total hours worked worldwide in 2010 was 9,592,102, an increase of 13% over the 8,468,979 2009 figure. This increase is above a pro rata increase in membership over the period (8.2%). As last year, this suggests slightly more work per company than in 2009. The breakdown is shown in Fig.2 by quarter and by work situation. In general, the profiles are similar to previous reports but the 'On Rope' element is now even more pronounced compared with the other situations.

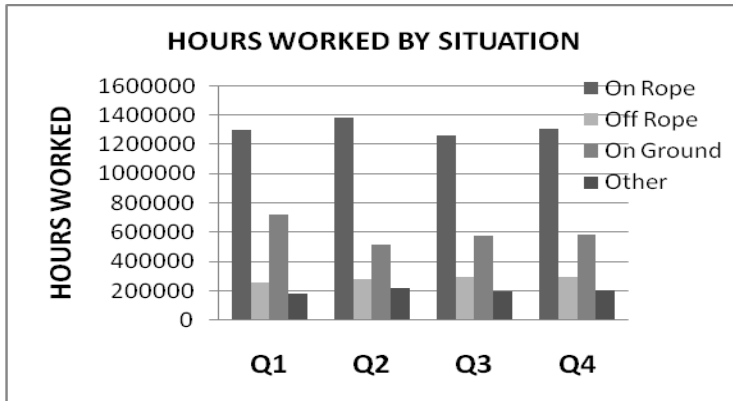


Figure 2 – Hours Worked by Situation

The graph (Fig.3) compares yearly totals of situation hours for 2008, 2009 and 2010. It demonstrates that the bulk of the increase in hours from 2008/9 to 2010 is due largely to an increase in 'On Rope' working.

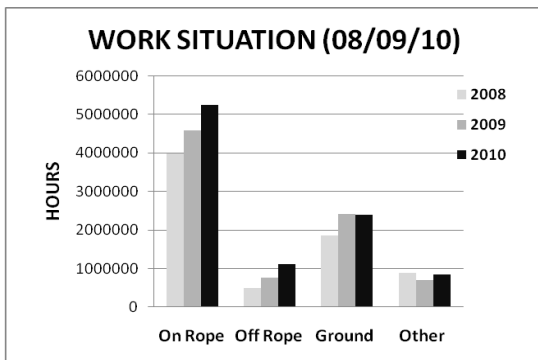


Figure 3 – Work Situation (08/09/10)

Traditionally, offshore working exceeded on-shore working. This trend reversed in 2009 but has now been re-established. Fig.4 Shows the split returning to 54% offshore and 46% on-shore.

If it were assumed UK Offshore working remained essentially static from 2009 to 2010, it would follow that the significant increase of about 0.92 million hours over 2009 figures would be from international offshore working. This is only conjecture.

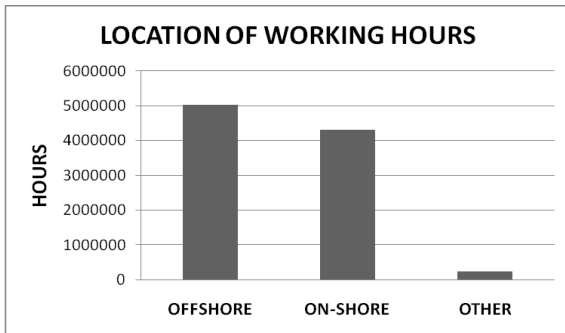


Figure 4 – Location of Working House

The quarterly figures (Fig. 5) show that the higher level of offshore working has been consistent throughout the year.

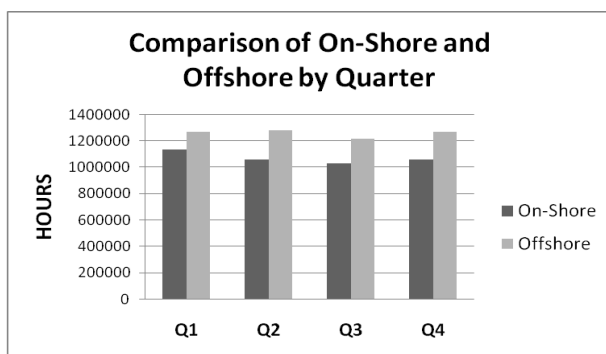


Figure 5 – Comparison of On-Shore and Offshore by Quarter

3.2 Hours on Ropes and Average Company Workforce

Plotting the 'hours on rope' against the number of companies has historically shown a straight-line relationship with a trend line of about 26,000 hours per company (Fig.6). Taking an average 1,760 hours per annum per worker, this equates to an average of about 15 rope workers per company. (It should be noted that only hours on rope is considered here).

If the *total* reported hours of 9.59 million hours is used, the figure rises to about 30 employees per company, slightly higher than the 28 in 2009. Note that the total of 'employees' includes all labour hours including sub-contract, self employed etc.

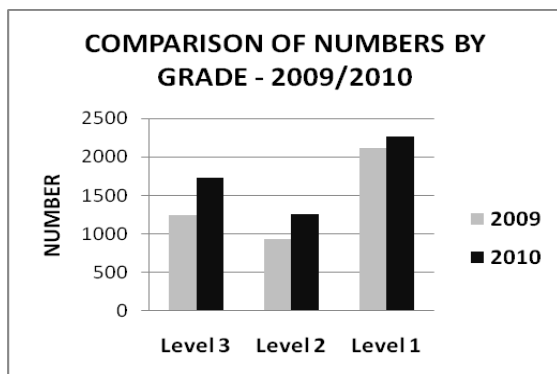


Figure 6 – Hrs. on Ropes V Nos. Companies

With a total of 9.59 m hours, and assuming 1,760 hours per annum per worker, a figure of $9.59 \text{ m} / 1,760 = 5,450$ fully employed employees is obtained. The reported total for all employed (direct, self and sub-contract) in 2010 was 7,588 (6,509 in 2009). This apparent conflict has previously been argued to be a result of 'under-utilisation' of operatives. In practice, it probably indicates that many rope access technicians (RATs) may be employed elsewhere on unrelated work but are recorded as 'employees' (and, hence, assumed fully employed as RATs).

3.3 Employment Levels During 2010

The quarterly level for directly employed personnel was about 5,000 with a further 2,000 sub-contractors and self-employed. The remaining 800 or so were 'other' category workers such as non-IRATA qualified employees etc. The chart (Fig.7) shows the breakdown of the average totals by grade and status. 'Other' grade is omitted in the chart.

The average total number of IRATA trained operatives (Level 1-3 inclusive) was 5,240 (about 69% of total employed), a significant increase in the total of 4,291 reported for 2009. As usual, the dominant grade employed was Level 1 followed by Level 3 operatives.

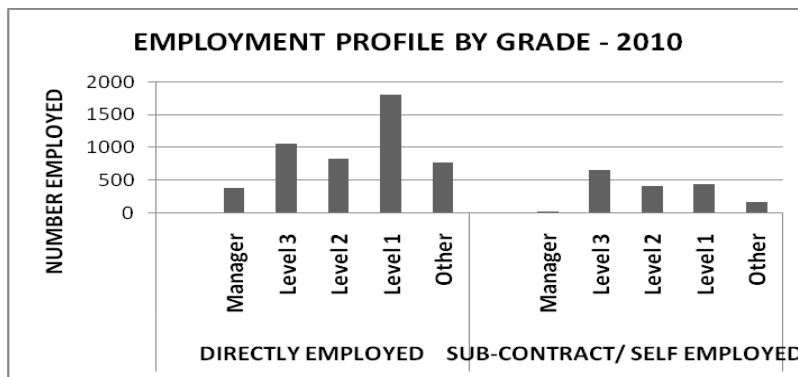


Figure 7 – Employment Profile by Grade – 2010

It may be useful to compare the numbers for qualified technicians against those for 2009 (Fig.8).

There is a marked increase in the number of both Level 3 and Level 2 operatives. The increase in Level 3s probably reflects the insistence on Level 3 site supervision as a minimum requirement by IRATA.

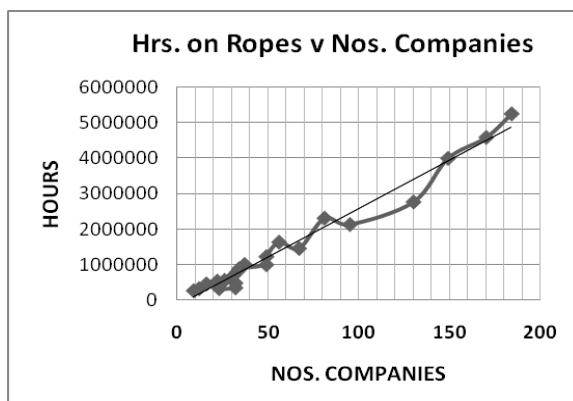


Figure 8 – Comparison of Number by Grade – 2009/2010

The apparent relatively small increase in Level 1s will be the difference between new recruits to Level 1 and the 'loss' of Level 1s to Level 2. Similarly, for Level 2s, the increase will be the difference

between Level 1s raised to Level 2 and Level 2s becoming Level 3 (ignoring direct entries and losses/retirements etc). Numerically, these transitions may be summarised:

Level 1 Increase of 145
 Level 2 “ 323
 Level 3 “ 482

The logic will then be as follows:

Level 3 was raised by 482. These would come from Level 2 numbers. Therefore, Level 2 increase was a loss of 482 and a gain of (323+482) = 805.

The 805 needed to achieve the Level 2 overall increase must have come from Level 1. Therefore, the actual rise in Level 1 was the sum of a 'loss' of 805 and gain of 145 = 950. This equates to the overall increase in qualified operatives of about 950 for the year. The net result of these figures is that there is an overall upward shift in status of the workforce, with the proportion of Level 3 now at 33% of the total and Level 2 at 24%. Comparing these figures with those for 2009:

	2009	2010
Level 3	29%	33%
Level 2	22%	24%
Level 1	49%	43%

The relatively large fall in the *proportion* of Level 1s, 6%, is immediately apparent, compared to rises of 2% and 4% for Levels 2 and 3 respectively.

3.4 Training

As with the previous reports, it is not possible to assess the training, assessment and related activities, as this is not defined in data submissions, despite suggestions that it be specifically identified. It must account for a significant proportion of submitted hours in view of stringent training/assessment requirements.

4. ACCIDENT STATISTICS FOR 2010

4.1 Number of Submitted Reports

The total number of accident/incident reports submitted for 2010 was 60. The combination of an increase in working hours from 8.47 million hours in 2009 to 9.59 in 2010 and a reduction from 99 accident/incident reports in 2009 to 60 in 2010 will have a positive influence on rates. This assumes similar levels of reporting integrity from year to year.

Of the 60 events reported, 36 (60%) involved some degree of physical injury and six (10%) were due to ill health brought on at work. The remaining 18 (30%) were reported as dangerous occurrences.

It should be noted that seven incidents/accidents were reported without any supporting information provided. This limits the accuracy and value of quality checking of data. Furthermore, this absence of detail in some reports, taken together with an unexpectedly low submission rate, implies a degree of under-reporting not previously suspected.

4.2 Nomenclature

The following meanings apply to terms used in the sections that follow:

- **'Major' Injury** – e.g. Bone fractures (except fingers, thumbs, toes), unconsciousness under some circumstances, eye penetrations, amputations, dislocations, electric shock injuries. (See UK HSE definitions for details).
- **Serious Injury** – Not a 'Major' injury but requiring *more than three days* away from normal work. The term 'Minor' is used by HSE for this category.
- **< 3-Day Injury** – Not reportable and not requiring more than three days away from normal work.

- **‘Dangerous Occurrence’ (DO)** – Incident that could have resulted in injury or death but none was incurred. Situations and circumstances may occur in rope access that would be considered a ‘dangerous occurrence’ but are not covered by conventional definitions. For example, damaged or severed ropes would normally not be considered a DO, but, in rope access work, this would most certainly be considered a DO.
- **Ill Health** – Conditions leading to interruption or suspension of work due to non-injurious causes e.g. psychological, heat- or cold-stress, taken un-well (headache, stomach upset) or other non-trauma medical condition brought on by or made worse by work.

4.3 Consequence of Accident / Incident

The outcome or consequence of an accident or incident generally is used to analyse accident/incident data because the outcome of an event is tangible, measurable and readily analysed. Sadly, this process does not reveal true underlying cause(s). However, it does provide a measure of overall performance and performance changes with time.

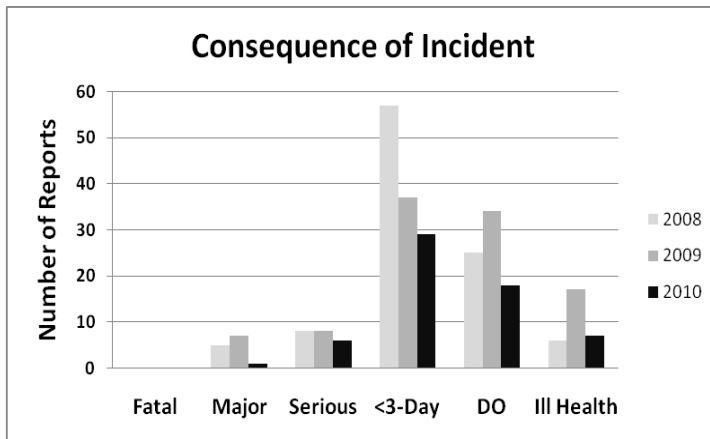


Figure 9 – Consequence of Incident

Fig. 9 compares the absolute numbers of accidents / incidents for 2008, 2009 and 2010. The profiles are essentially similar with ‘< 3-Day Injuries’ and ‘Dangerous Occurrences’ (DOs) dominating in all years.

There are several points arising from Fig. 9. Not least is the obvious large fall in both DOs and ‘< 3-Day’ injuries in 2010 compared with previous years. When this is allied to the significant reductions in both ‘Major’ and instances of ill health, the net result is a reduction in all reported accidents/incidents categories. This assumes the same level of reporting as in previous years.

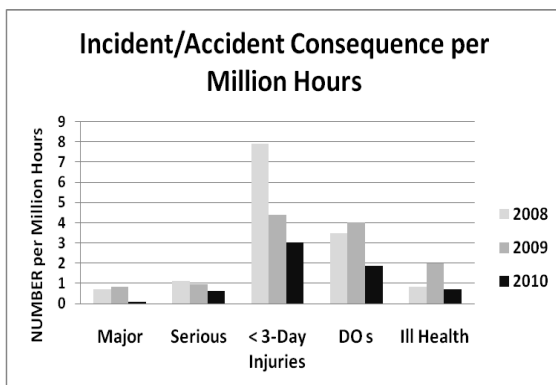


Figure 10 – Incident/Accident Consequence Per Million Hours

The absolute numbers in Fig. 9 do not take account of the 'hours at risk'. For this, it is necessary to divide the number of accidents/ incidents by the total work hours – 9.59M. The y-axis units in Fig.10 are given in number of accidents/incidents per million hours worked. The improvements in all categories are now even more evident.

There were no reported injuries to members of the public and no fatalities in 2010.

4.4 Situation of Accidents/Incidents

The chart (Fig.11) gives the locations of all 60 reported accidents/incidents for 2010 alongside those for 2009. The figures have been converted to 'per million hours' by dividing the absolute numbers by the total reported hours for each individual situation. In effect, the time of exposure at the different locations is taken into account by dividing the number of incidents or accidents by the hours spent for each situation.

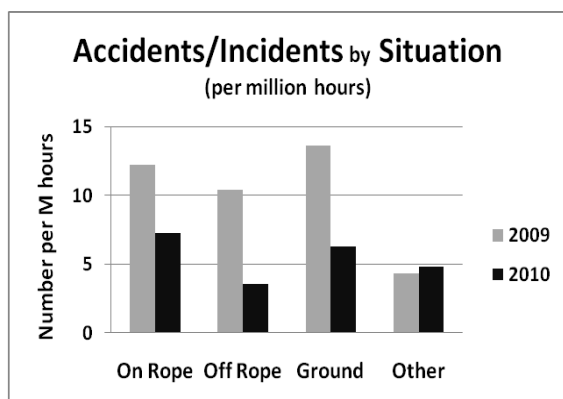


Figure 11 – Accidents/Incidents by Situation

The actual number of incidents/accidents for 'On Rope' working is 38 and much higher than the respective figures for 'Off Rope' (4) and 'Ground' (15). However, this is largely compensated for by the much higher number of hours for 'On Rope' working (see Fig.3 previously). As before, the reduction in the rates of incidents and accidents is very clear with the exception of 'Other' category events (training and a dog bite!) which remain at about five events per million hours. Indeed, there is now little difference between the rates for *all* situations.

Three of the seven significant injuries (Serious and Major) occurred when on rope.

4.5 Accident Events by Grade

In 4.3 above, all events were considered. The following examines only those events leading to injury. The actual number of injured individuals was 36, from a total workforce of 7,588. This gives an overall rate of about 4.7 per 1000 (less than half the 10 per 1000 rate for 2009).

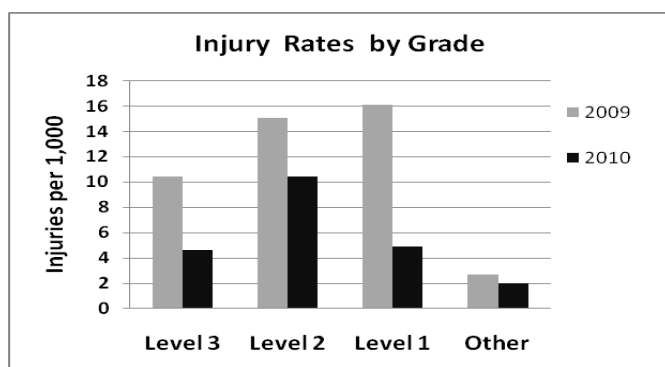


Figure 12 – Injury Rates by Grade

Fig.12 shows the total of injury events for each grade divided by the reported employed numbers of each grade (multiplied by 1000 to give injury rates per 1000 employed), ignoring managers. The significant reductions in injury rate sustained by all grades are immediately obvious, most notably for Level 1.

Level 1s have historically been most prone to injury but the situation changed in 2010. They are on a par with Level 3s and it is the Level 2s that now have twice the injury risk compared to Level 1 and 3.

Attention will now be turned to the nature of injuries sustained by personnel.

4.6 Body Part Injuries

The body part injuries sustained during 2008, 9 &10 are shown in Fig. 13 (Care is needed here because some are multiple injuries sustained by an individual but counted as separate items). The general reduction in injuries for 2010 is clear with the exception of injuries to arms and legs. Eye injuries have shown a substantial fall from previous years. Injuries to hands and fingers continue to predominate but at a much reduced level.

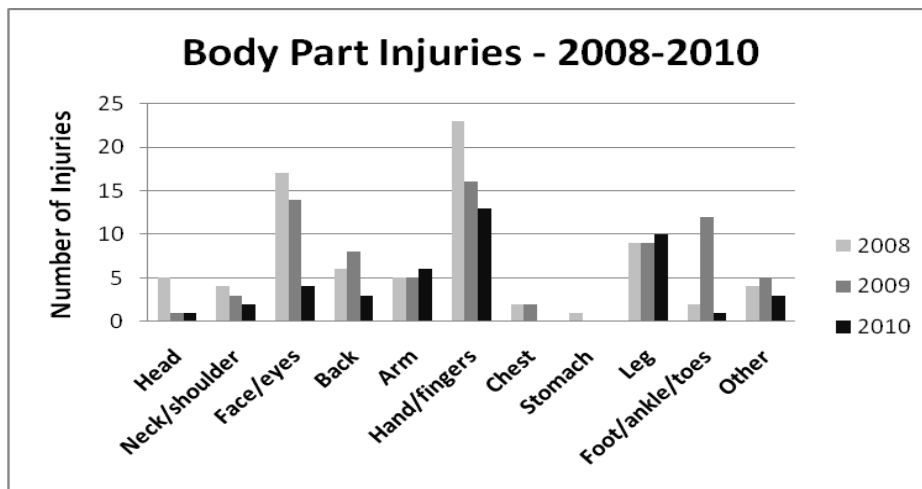


Figure 13 – Body Part Injuries – 2008-2010

The only head injury reported was due to a fall from a ladder and resulted in minor bruising. The only ‘Major’ injury was a leg injury following a fall when a suspension rope was detached. It is presumed this resulted in a

fracture because the operative was off work for over 5 months.

Hand/finger injuries (13) were mainly caused by trapping or pinching (6) or cutting by tools (3). Three ‘ill-health’ items were due to chemical skin burns from handling corrosive materials.

Further closer analysis would be unrealistic in view of the limited population and lack of information.

4.7 Causes of Accidents / Incidents

[Note: The number of ‘causes’ exceeds the actual number of events because some events have more than one cause. Additionally, not all ‘Causes’ resulted in actual injury].

The chart (Fig.14) shows the breakdown of causes for reported accidents/incidents for 2010 and 2009. Significant numbers occurred in only three categories in 2010 – Falls, Tools or Materials and Other.

Of the ten ‘falls’, seven occurred in connection with ropes, though only one led to actual reportable injury. Three reports were ‘falls’ in connection with training or assessment exercises. One fall was due to a severed rope (restrained by back up) and a second to a rope detached by a third party.

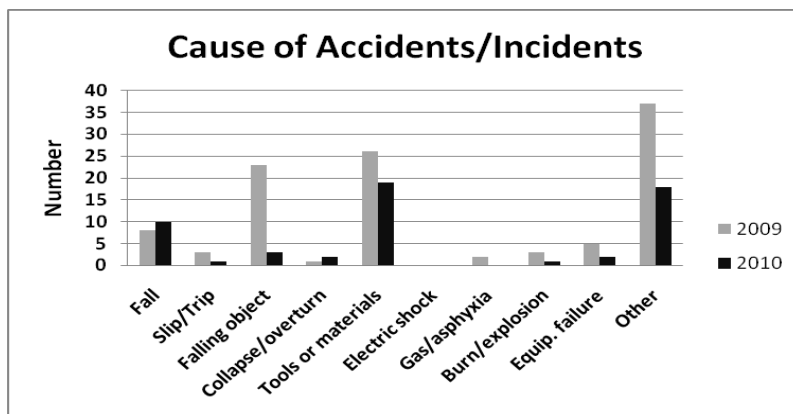


Figure 14 – Cause of Accidents/Incident

Tools or Materials still account for the majority of injuries, typically dust and grit entering eyes, slipping tools and hand injuries.

The 'Other' category includes a number of miscellaneous items such as skin damage from chemical agents, heat stress, the dog bite, deluge release (PTW failure?) and discovery on site of a corpse by two operatives. Whilst some items may not necessarily be considered 'direct' cause of an accident or incident, they are considered sufficiently important in rope access work to be reported and included in statistics.

'Human factors' and associated issues rarely feature in reports. In some instances, accidents and incidents are attributed to 'human error' in isolation. This is clearly an area that deserves much closer attention and the issue of 'competence', in its widest sense, is being given further attention by IRATA in an effort to drive down the accident rates still further.

The large decrease in reported falling object incidents must be a very welcome finding. The potential for serious injury/fatality arising from such incidents in any work site is obvious. It would appear that greater effort is being made to reduce risks from this potential cause of accidents.

4.8 Time Lost

Reported time lost was about 230 days or $230/7,588 = 0.03$ days per person per year (0.09 in 2009). This is well below the 2009/10 HSE figure of 1.07 days for combined ill health and injuries for all industries. As usual, it is probable that there is a high degree of under-reporting by IRATA companies although, given the significantly lower accident and ill-health rate for IRATA companies, a lower time lost figure could be reasonably anticipated.

4.9 Other Factors

- **Weather Conditions** - In only two cases was weather a possible factor in reported incidents. One was due to sunstroke/dehydration and the second an aggravated back injury in cold conditions.
- **Third Party** – Ten incidents/accidents were directly attributable to third parties – from a dog-bite to discovery of a corpse on site, fire pump start-up, sparking seen when on rope, draw-works start-up prior to leaving the site, detached rope when in use and incorrect or inadequate isolation prior to work. Whilst individually such items may be dismissed as 'one of those things', collectively they represent a significant proportion of all reported incidents. In some cases, very serious injuries or fatalities could easily have occurred. The message is to be aware at all times of third party activities that could jeopardise the safety of others.
- **Musculo-skeletal Injuries / Manual Handling** - Only three reports of musculo-skeletal injury were found – all 'on rope'. Given that work on rope may incur an element of physical effort, it is perhaps surprising that the incidence of such injuries is so low.

5. COMPARISON OF ACCIDENT / INCIDENT DATA WITH PREVIOUS YEARS AND OTHER AGENCIES

5.1 Working on Ropes

To maintain consistency with historical IRATA data for work On Ropes in isolation, Table 1 is a compilation of data since 1989 and amended to include 2010 data. A graphical presentation of the total incident rate per year is shown in Fig.15 where 'total' refers to the sum of reportable accidents (Fatal, Major, Serious and <3-Day Injuries) sustained whilst On Rope. Dangerous Occurrences are now omitted.

Traditionally, IRATA companies have been urged to submit reports on DOs irrespective of whether or not the reported events complied with other national and international agency criteria. Consequently, there was potential conflict between maintaining this valuable source of information and presenting an unduly pessimistic view of the safety statistics. This should remove any inhibitions in reporting DOs.

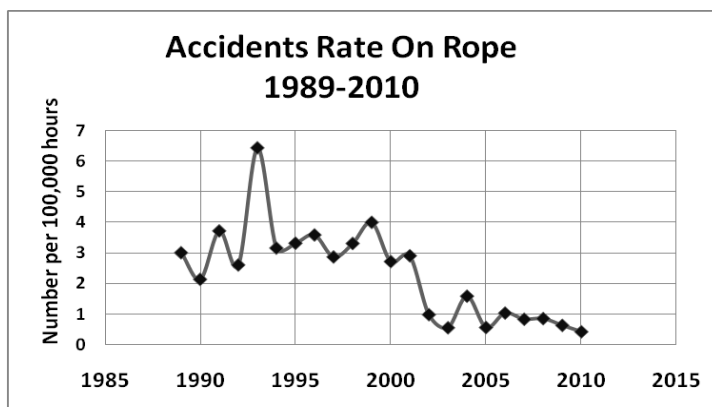


Figure 15 – Accident Rate on Rope (1989/2010)

The continuing maintenance of an accident / incident rate of well below 1 per 100,000 hours of work on rope for the fifth consecutive year is an achievement of which IRATA members should justifiably proud. It is emphasised that the graph is based solely on accidents that occurred whilst on ropes.

5.2 Basis for Comparison of IRATA Data

This analysis will continue using total working hours (i.e. not just 'on rope') to maintain consistency with general reporting practice and allow direct comparison of data with other agencies.

It is necessary to change the units used, moving from 'per 100,000 hours' to 'per 100,000 employees'. For the annual total of 9.59 million hours, numbers of incidents/accidents are multiplied by $(100,000/9.59 \cdot 10^6) \times 1,760$ (hrs per year per employee) = **18.4**.

An alternative method takes the employment numbers (Table 2) and applies a multiplication factor to accident and incident data to reach 100,000 employees. Average employment (from quarterly figures) = 7,558 employees. To convert to 100,000 employees, multiply by $100,000/7,558$ = **13.2**.

This latter figure assumes 100% employment and includes sub-contractors; therefore, in reality, a slightly higher figure might be expected. Bearing in mind the approximations used for both calculations, it seems prudent to use the mean of **15.8** and this figure will now be used to convert IRATA accident figures. This figure is, in effect, the multiplication of any single event to reach the equivalent for a workforce of 100,000.

Using the above, IRATA figures become (injuries per 100,000 workers, rounded):

• Fatalities				Nil
• Major Injuries -	1 x 15.8	=		16
• Serious (>3-Day) -	6 x 18.1	=		109
			Total	125

5.3 Comparison of IRATA Accident and Incident Data with UK, EU and USA Data.

The UK HSE website key figures for 2009/10 provisional data for various industries are tabulated (rounded) and charted below with equivalent IRATA figures from above. HSE reports an estimated 57% under-reporting against Labour Force Survey figures.

(Note that here the term 'Serious' is used in place of the HSE term 'Minor'. This is because 'Minor' is often interpreted to mean 'trivial' or 'not reportable' in submissions to IRATA.)

* <http://www.hse.gov.uk/statistics/sources.htm>

Industry	Major Injury	Serious (>3-Day injuries)	Total (incl fatal)
Agriculture, Forestry & Fisheries	242	460	710
Extractive and Utility Supply	207	560	771
Manufacturing	162	609	772
Construction	230	503	735
All Industries	102	372	474
IRATA	16	109	125

(All figures in number per 100,000 employees. Fatal injuries incorporated in 'Total' column).

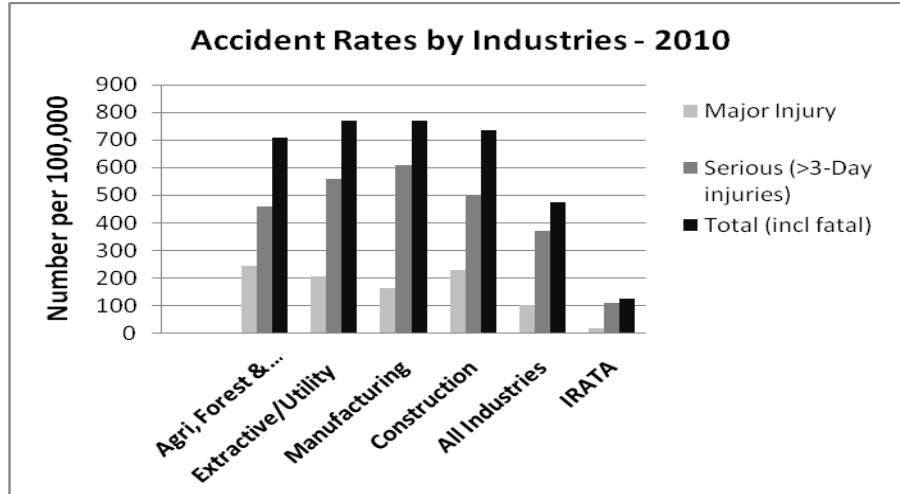


Figure 16 – Accident Rates by Industries - 2010

The figures and graph (Fig.16) speak for themselves.

The position is even further enhanced if the overall Labour Force Survey figure of 840 injuries per 100,000 is used for comparison.

By any standard, IRATA figures are impressive, being only about 26% of the All Industry figures. Allowing for the accepted under-reporting to HSE, this falls even further to about 15%. This may be slightly tempered by the possibility of some under-reporting by IRATA companies; in the case of Major and Serious Injury events, this is probably very low or nil. (Note that even a single event is 'worth' 16 'points').

Direct comparison against EU figures is limited for several reasons; hence, care is needed in interpretation. Latest available Labour Force Survey EU figures are for 2007 and include work-related road traffic accidents (roughly 10% of total on average) but not UK. EU figures are for EU-27 member states and are 'per 100,000' for '>3-Day injuries'. Examples of EU data are shown alongside UK and other randomly chosen members only to demonstrate the large range of figures encountered in the data. Sources:

http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-31-09-290/EN/KS-31-09-290-EN.PDF
<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tps00042&plugin=1>
www.hse.gov.uk/statistics/european/tables.htm

SECTOR	Average EU-27 (2007)	UK (2007) *	Germany	Denmark	France	Sweden
Average	3,200					
Agriculture, Forestry	4,213	2,048	8,267	1,559	1,929	1,158
Construction	6,075	2,010	5,773	4,752	7,656	1,614
Manufacturing	3,656	867	3,029	4,422	3,415	1,379
IRATA (2009)	125					

*Note an estimated 50% under-reporting.

There are also problems in comparing IRATA data with US data. The table below includes injury and illness and, again, there are significant differences in the basis for the two sets of data. Data is for 2009 and converted to 'per 100,000'. US Bureau of Labor now includes Public Sector (State and Government) figures within its analysis.

US INDUSTRY SECTOR	Incidence of Injury and Illness per 100,000 (2009)
All Industry and Public Sector	3,900
Agriculture, forestry, fishing	5,300
Manufacture	4,300
Construction	4,300
IRATA	141

(Source: <http://www.bls.gov/news.release/osh.t01.htm>)

It will be noted that the IRATA figure above has been slightly increased. This is to take account of one of the six 'Illness' reports that led to 7 days off work and, hence, more closely align IRATA data with US data. As with EU, the IRATA figure is only a small fraction (<4%) of the US 'All Industry' figure.

5.4 Illness

The incidence of illness in rope access work has historically been low and 2010 was consistent with this as only six reports cited it as a cause. Only one case resulted in time off work. Even if all six

cases were included, this would result in a rate of $6 \times 15.8 = 95$ per 100,000. HSE data for 2010 gives a LFS self-reported illness figure overall of 1,860 per 100,000, some twenty times greater.

[\[http://www.hse.gov.uk/statistics/overall/hssh0910.pdf\]](http://www.hse.gov.uk/statistics/overall/hssh0910.pdf)

6 SUMMARY

The following summarise some key points from the report:

Membership/Employment

- Membership had risen to 184 companies by December 2010.
- Total employed increased from 6,509 in 2009 to 7,558.
- Hours worked worldwide reached 9.59 million.
- Total hours reported for working 'on rope' was 5.25 million hours.
- Total average qualified IRATA technicians employed in 2010 was 5,241. Proportionately, there were increases in Level 2 and 3 numbers but a decline in Level 1. Actual numbers were as follows (2008/9 figures in brackets):

	2010	2009	2008
Level 1	2259	(2114)	(1966)
Level 2	1252	(929)	(781)
Level 3	1730	(1248)	(1138)

Accidents/Incidents

- Accident / incident submissions totalled 60, 36 involving injury to individuals.
- There were:
 - 1 Major injuries (7 in 2009)
 - 6 Serious (Minor) injuries (8 in 2009)
 - 29 Not Reportable or <3-Day injuries (37 in 2009)
 - 18 Dangerous Occurrences (34 in 2000)
 - 6 Ill Health cases (17 in 2008)
- Accident / incident rates were broadly the same for all locations (on rope, off rope, secure ground and 'other'), at ~5 events per million hours.
- The highest risk of injury was to Level 2 technicians with an injury rate was about 10 per 1000 employed. Level 1s and 3s were at about half this risk of injury.
- There were significant reductions in most injury categories: face/eyes, back, hands/fingers and feet/ankles particularly. Leg and arm injuries remained at about the same level.
- The accident rate for work on rope fell for the fifth consecutive year to 0.42 all injuries (Major, Serious and NR) per 100,000 hours – the lowest recorded to-date.
- Comparison of accident rates with UK national statistics reveals IRATA rates to be about ¼ of the All Industry rate and 1/6th of the rate for comparable industries.
- Comparisons with EU Labour Force Survey figures are even more impressive, being about 3-4% of the latest available 2007 average EU figure. A similarly low figure is obtained in comparison to the US Bureau of Labor 2009 All Sectors average.

7. CONCLUSIONS

Based on the reports provided, the following conclusions may be reached:

1. IRATA membership continued to rise in terms of company membership, employment numbers and hours worked.
2. The number of incidents and accidents reported fell by a very significant number which, taken together with the increase in working hours and numbers employed, has resulted in an impressively low accident rate of 125 per 100,000 employed.
3. This figure is only $\frac{1}{4}$ of the UK All Industries rate for 2009/10 and $\frac{1}{6}$ th of the rate for comparable industries. It is only 3-4% of the EU Average for 2007 and US Bureau of Labor 2009 average (latest available figures for both).
4. IRATA membership should be justly proud of an enviable safety record for 2010 and, particularly, of the continuing downward trend of the accident rate for the last six consecutive years.

8. RECOMMENDATIONS

1. The continuing enjoyment of a favourable safety record should not impede further improvement particularly with respect to:
 - a) Checking and protecting rope suspension points
 - b) Third Party activities jeopardising safety of those on rope
 - c) Tool handling by technicians
2. IRATA should seek to improve the quality of accident/incident reporting by members, particularly with respect to:
 - Correct categorisation of Major, Minor (or better, 'Serious') and Not Reportable accidents.
 - Provision of a brief summary of events, *irrespective of other reporting information supplied to IRATA by other routes.*
3. The fall in the proportion of Level 1 technicians, compared to the numbers of Level 2 and Level 3 operatives, should be noted.
4. The 'human factors' element is still virtually ignored in reports. The 'competence' issue, in its widest sense, is being addressed by IRATA and this should be encouraged, particularly as a 'nil accident' regime must be an ultimate goal.
5. Membership should be congratulated on the continuing excellent health and safety record.

TABLE 1 ACCIDENT RATES FOR 'ON ROPE' WORKING 1989-2010

Year	Nos. of Companies	Hours on ropes	None reportable Accidents (NRA)	RIDDOR Accidents on ropes	AR for RIDDOR accidents * **	AR for All Accidents * ***
1989	9	267504	8	0	0	3
1990	12	327645	7	0	0	2.13
1991	16	457928	17	0	0	3.71
1992	22	537920	13	1	0.19	2.6
1993	23	327000	21	0	0	6.42
1994	32	348749	11	0	0	3.15
1995	32	484285	16	0	0	3.31
1996	26	559035	18	2	0.36	3.58
1997	31	699688	11	9	1.29	2.86
1998	37	1006538	23	10	0.99	3.3
1999	33	803365	29	3	0.37	3.99
2000	34	887206	21	3	0.34	2.71
2001	49	999010	25	4	0.4	2.9
2002	49	1225930	12	0	0	0.98
2003	56	1634482	9	0	0	0.55
2004	67	1457848	22	1	0.07	1.58
2005	81	2311265	10	3	0.13	0.56
2006	95	2132141	21	1	0.05	1.03
2007	130	2765483	21	2	0.07	0.83
2008	149	3859584	25	8	0.21	0.85
2009	170	4582642	15	14	0.33	0.63
2010	184	5247365	18	4	0.08	0.42
TOTAL AVERAGE	or	32922613	373	65	0.20	1.33
* Units for Accident Rate (AR) number per 100,000 hours worked						
** - Col 5 divided by hours			x 100,000			
*** - Col 4 + 5 ditto						

TABLE 2 SUMMARY EMPLOYMENT BY GRADE – 2010

QUARTER	1	2	3	4	AVERAGE
AV NO OF PERSONS DIRECTLY EMPLOYED					
Manager	247	456	415	386	376
Level 3	908	1078	1125	1110	1055
Level 2	744	844	828	892	827
Level 1	1705	1889	1779	1841	1804
Other	649	785	804	824	766
TOTAL	4253	5052	4951	5053	4827
AV NO OF PERSON SUB CONTRACT OR SELF EMPLOYED (SC)					
Manager	18	22	25	14	20
Level 3	626	624	662	688	650
Level 2	359	397	415	444	404
Level 1	681	698	237	143	440
Other	199	237	143	105	171
TOTAL	1769	1980	1968	1999	1929
OTHER NON-IRATA COMPANY EMPLOYEES					
Manager	84	237	218	200	185
Level 3	3	8	73	13	24
Level 2	6	14	59	6	21
Level 1	4	13	18	28	16
Other	592	505	576	551	556
TOTAL	689	777	944	798	802
TOTAL EMPLOYED	6711	7809	7863	7850	7558

TABLE 3 SUMMARY DATA OF WORKING HOURS – 2010

Working on ropes		Q1	Q2	Q3	Q4	TOTALS
Onshore	Directly employed	500926	486499	471831	491010	1950266
	Sub-contract	130307	130071	119596	103661	483635
Offshore	Directly employed	450103	560745	493484	513492	2017824
	Sub-contract	190221	179531	145112	158256	673119
Other	Directly employed	14893	20394	17375	24695	77357
	Sub-contract	11176	7261	14366	12361	45164
	TOTAL	1297626	1384501	1261764	1303474	5247365
Working at height						
On shore	Directly employed	85676	104511	105123	109600	404910
	Sub-contract	74389	49669	72637	69212	265907
Offshore	Directly employed	38993	65460	59065	55650	219168
	Sub-contract	48339	54557	53613	50723	207232
Other	Directly employed	2620	4105	3095	3382	13202
	Sub-contract	3165	1219	2112	2407	8903
	TOTAL	253182	279521	295645	290974	1119322
Work at ground or secure floors						
On shore	Directly employed	200231	157225	172511	199199	729166
	Sub-contract	35085	16170	13684	15083	80022
Offshore	Directly employed	339899	279598	306518	313166	1239181
	Sub-contract	136315	48508	43142	48585	276550
Other	Directly employed	5081	2365	42507	3952	53905
	Sub-contract	1065	9331	1050	714	12160
	TOTAL	717676	513197	579412	580699	2390984
Other type of work						
On shore	Directly employed	98027	108547	67024	67024	372627
	Sub-contract	8479	8479	8282	3774	25039
Offshore	Directly employed	54135	72621	96820	108038	331614
	Sub-contract	13261	20475	17703	17703	73233
Other	Directly employed	7783	6072	4597	3950	22402
	Sub-contract	2627	3365	192	3332	9516
	TOTAL	184312	219559	194618	203821	834431
					TOTAL	9592102

(Tables 2 and 3 courtesy of IRATA secretariat)

