

THE IMPACT OF SAFETY LEGISLATION IN THE CONSTRUCTION SECTOR IN TRINIDAD AND TOBAGO

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ABSTRACT

Trinidad and Tobago is one of the more industrialised Commonwealth Caribbean island states with a fairly well-developed range of construction activities. Nevertheless, independent study of the construction sector began in earnest only in 1970. For the decade 1974 - 1983, the country witnessed unprecedented economic growth as demonstrated by a 20-fold increase in the GDP, based exclusively on the upward movement of oil prices in the period. There was a literal construction boom during this period, which had come to a discernible halt by 1985. The paper attempts first to review the body of legislation which preceded the construction boom with specific reference to safety within the construction sector. The review then seeks to study the legislative regime within the same ambit from the boom to the present.

The range of documents is very scant, to say the least, and while the study has revealed that there were several attempts to improve the legislative coverage in the area, these attempts have not passed into law. The last three decades have seen an accompanying and progressive increase in construction accidents and deaths, the loss of productivity due to loss of man-hours, ineffective working practices, unnecessary damage to adjoining property or to works under construction demand intervention. These would argue most eloquently for a serious redirection of the legislative focus on industrial accidents and the health and safety of workers in general, and of the construction sector in particular.

The trade union movement, the construction professional associations, the insurance companies and the Ministries of Industry and Commerce as well as Labour must take stock.

1.0 BACKGROUND

Within the Commonwealth Caribbean countries, the concept of a construction sector *per se*, existing separate and distinct from the other economic sectors, is of recent vintage. From a review of national economic development through the instruments of five-year development plans and annual budgets, it was observed that in Trinidad and Tobago, the term "construction sector" was not identified by national planners until the budget of 1970. This is of some significance especially since Trinidad and Tobago is possibly the most industrialised state in the region and with the most developed construction sector. This is not to say that elements of this sector had not been identified or that there was no construction activity before this time. It simply was not seen as possessing all the sector characteristics, particularly cohesion and dynamics, to justify separate study for its wealth-creating potential.

While the national economy in Trinidad and Tobago experienced a period of 10 years of unprecedented growth between 1974 - 1983, only one piece of legislation specifically related to safety in the construction sector was enacted. In 1977, in the wake of increasing episodes of collapse of excavation trenches, resulting in several deaths and many more instances of serious injury, The Factories (Protective Measures) Order, 1977 was made. A number of these accidents occurred on jobs in which sewer trenches were being excavated. It is interesting to note that these were on sites at which either private contractors were carrying out work for the Water and Sewerage Authority or the Authority was employing its own staff. Several instances of trench wall collapse and subsequent injury to workers were to occur on jobs

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where similar sewer work was being carried out on private housing and industrial estates by private contractors.

While excavation work was to produce the most widely publicised deaths, construction accidents were to claim lives and cause serious bodily injury in several other areas. There were instances of workers falling from roofs, being seriously injured as scaffolding and formwork for concrete structures failed, as temporary structures collapsed and as unreinforced masonry walls toppled. Several workers were electrocuted. Workers were injured, even crushed by construction equipment on construction sites but even more so at quarries. In fact, it was long after the economic boom and the consequent construction boom that several persons were to lose their lives in the Camp Omega explosion of April 26, 1988. An explosion at the central storage facility for explosives used in the quarry industry, which was under the control of the national protective services, was to result in the unfortunate deaths of several members of the protective services. This was to lead to a commission of enquiry. To date, not even this catastrophe has been able to attract enough legislative focus to bring the local body of law in step with the level of activity and sophistication of the construction sector.

The paper presents a review of both fatal and non-fatal accidents in the construction and related sectors from 1973 - 1992 as shown in Tables 1 and 2. There was a sudden and significant increase in fatal and non-fatal construction accidents during the boom years (1974 - 1983). The same pattern was observed for the sector involving wood and wood products, persons falling (from structures) and persons injured by falling objects.

Between 1974 and 1984, there were 25 fatal accidents in construction and 1,537 non-fatal. Since that period, the post-boom period, no fatal accidents have been recorded and the total non-fatal accidents have fallen to 88 in the eight-year period (1985 - 1992). One must note that these figures do not include several construction-related activities, e.g., lumbering, manufacturing of construction materials and building components. It does not include industrial maintenance, repairs or renovation in the industrial sector. In fact, one can only wonder if some of the accidents resulting in persons falling or objects falling on objects were not within the construction sector *per se*.

During the boom years, fatal accidents in construction accounted for almost 50% of all accidental fatalities in construction and related sectors. There were 25 construction fatalities to 58 total fatalities in construction-related sectors (43%) between 1975 - 1984. For the 1,537 non-fatal accidents in the construction sector, there was a total of 6,936 in all construction and related sectors or 22% during the 1974 - 1984.

These figures serve to demonstrate that both fatal and non-fatal accidents increased suddenly and significantly during the boom years, falling off precipitously after this period. They demonstrated that construction was the most dangerous in terms of fatal accidents but not in the non-fatal accidents, although the latter was significant. One can nevertheless only suspect that during the post-construction boom period, recording of non-fatal accidents had become less an issue and that these figures may be very much less than the actual accidents which occurred.

It is against this background that this study is undertaken of the regime of existing safety legislation operating within the construction sector in Trinidad and Tobago. It concludes by making recommendations for some initiative in the development of existing laws.

2.0 REVIEW OF EXISTING SAFETY LEGISLATION WITHIN THE CONSTRUCTION SECTOR

2.1 The Factories Ordinance Ch. 30, No. 2

The full range of safety legislation impacting on construction must be culled from a wide range of economic and social sectors. One may argue that the most critical is the Factories Ordinance, Ch. 30, No. 2, Laws of Trinidad and Tobago 1950 edition. This Act, first enacted as Ordinance No. 44 of 1946, was described in its long title as "An Ordinance to Provide for the Promotion of the Health, Safety and Welfare of Persons Employed in Factories". For the purpose of the legislation, "factory" means any premises in which, or within the close or curtilage or precincts of which, persons are employed in manual labour in any process for or incidental to any of the following purposes, namely:

- (a) The making of any article or part of any article, or

YEAR	CONSTRUCTION		WOOD PRODUCTS		FALL OF PERSONS		INJURY FROM FALLING OBJECTS	
	Fatal	Non-Fatal	Fatal	Non-Fatal	Fatal	Non-Fatal	Fatal	Non-Fatal
1973	-	-	0	4	0	345	0	290
1974	-	-	NA	NA	0	359	0	299
1975	3	52	0	21	1	354	2	280
1976	0	56	0	17	0	331	1	288
1977	4	52	1	24	2	249	3	278
1978	2	145	2	145	2	340	1	295
1979	2	257	0	57	2	287	2	260
1980	1	190	0	4	1	327	0	175
1981	6	327	0	3	4	263	0	216
1982	3	123	0	2	2	257	0	190
1983	4	174	0	3	0	211	4	160
1984	0	161	0	7	3	178	0	182
1985	0	70	0	1	0	151	0	145
1986	0	7	0	7	1	122	0	99
1987	0	2	0	1	0	122	0	98
1988	0	6	0	0	3	97	0	76
1989	0	2	0	0	1	89	1	62
1990	0	1	0	4	0	88	0	24
1991	0	0	0	0	0	64	1	47
1992	0	0	0	4	0	46	0	29

Source: Annual Statistical Digest, Central Statistical Office, Republic of Trinidad and Tobago

Table 1: Fatal and Non-Fatal Accidents in Construction and Related Sectors from 1973 - 1992

YEAR	CONSTRUCTION FATAL ACCIDENTS	TOTAL RELATED SECTOR FATAL ACCIDENTS	CONSTRUCTION NON-FATAL ACCIDENTS	TOTAL RELATED SECTOR NON-FATAL ACCIDENTS
1973	-	0	-	639
1974	-	0	-	658
1975	3	6	52	707
1976	0	1	56	692
1977	4	10	52	603
1978	2	7	145	925
1979	2	6	257	861
1980	1	2	190	696
1981	6	10	327	809
1982	3	5	123	572
1983	4	8	174	548
1984	0	3	161	528
1985	0	0	71	367
1986	0	1	7	235
1987	0	0	2	223
1988	0	3	6	179
1989	0	2	2	173
1990	0	0	1	117
1991	0	1	0	111
1992	0	0	0	19

Table 2: Fatal and Non-Fatal Accidents in Construction and Total Construction and Related Sectors

(b) The altering, repairing, ornamenting, finishing, cleaning or washing, or the breaking of or demolition of any article; or

(c) The adopting for sale of any article;

being premises in which, or within the close or curtilage or precincts of which the work is carried on by way of trade or for purposes of gain and/or over which the employer of persons employed therein has the right of access or control”.

The Ordinance has therefore drawn within the ambit of the definition of factory, not only the widest range of the term factory in popular usage but includes

construction sites and mining pits, rock faces and quarried. But it is patently obvious that the Ordinance was written expressly for the traditional factory setting and all attempts to accommodate the construction site or the quarry would require considerable elasticity in the application of definitions.

Part III deals with general provisions for health including the question of overcrowding, ventilation, sanitary conveniences, etc.

Part IV (Safety) deals with general provisions in relation to the use of machinery, construction, maintenance, hoists and lifts, steam boilers, pressure vessels, means of escape in case of fire, explosives and flammable materials.

Part V (Health, Safety and Welfare) deals with special provisions and regulations covering a wide range of issues.

Section 49 addresses the issue of "Works of Building and Engineering Construction". 49(3) reads,

"Any person undertaking any building operation or works of engineering construction to which this Ordinance applies shall, not later than seven days after the beginning thereof, serve on the inspector for the district a written notice stating the name and postal address of the person undertaking the operation or works, the place and nature of the operation or works, whether any mechanical power is used and, if so, its nature, the name of the local health authority within whose district the operations or works are situated and such other particulars as may be prescribed".

The principal weakness in respect of construction is that the Ordinance was not conceived of as a legal instrument to regulate the efficient and safe operation of construction sites.

2.2 The Factories (Protective Measures) Order, 1977

In 1977, the Factories (Protective Measures) Order 1977 was enacted as subsidiary legislation under the Factories Ordinance to deal exclusively with the incidence of accidents in sewer trench excavation. It creates a duty, residing with the employer, to provide the worker who is required "to work in an area or in the vicinity of an area where excavation, trenching, demolition, underground operation or other related operations are being carried out", to be provided with "approved protective equipment for the protection of the head, eyes, respiratory organs, hands, feet and such other parts of the body as may be necessary". It goes on to treat with nightwork in excavated areas, hazardous dust, gases, fumes, atmospheres deficient in oxygen, and noise and expands on the duty to protect the worker so involved.

The order talks of provisions to ensure safety in respect of raised walkways, runways or sidewalks. It treats with power cranes operating in these areas. It creates the duty for daily inspections to be carried out by a qualified engineer or a person authorised by him in writing. This raises two questions. Who is a qualified engineer? And upon what basis or criteria can the engineer delegate this duty to another person not being a qualified engineer?

The Engineering Profession Act of 1985 which sought to provide for "the registration of engineers and otherwise regulate the practice of engineering", recognises a "registered engineer" and not a qualified engineer. But in 1977, there was no act of parliament of the Government of Trinidad and Tobago that described a qualified engineer. Nevertheless, the 1977 Order dealt in some detail with precautions to be taken for minimising risks of damage to sewer, lines, etc.

Order 9(1) reads,

"A person who intends to carry out an excavation shall, at least seven days before the date on which the excavation is to begin, submit to the Factory Inspectorate and to the utility companies, such as the Water and Sewerage Authority, the Telephone Company and the Electricity Commission such information as may be requested by the Factory Inspectorate".

The principal thrust of the order is to deal with shoring of walls of excavation, their design, inspection and construction.

Order 14(1) reads:

"Supporting systems such as piling, cribbing, shoring or other similar systems shall be designed by an engineer and shall conform to accepted engineering requirements; such systems shall also be planned by an engineer where an excavation:

- (a) Is likely to exceed 20 ft. in depth;
- (b) Is adjacent to structures or improvements; or
- (c) Is subject to vibration or groundwater".

Again, there is the introduction of the term engineer, but without reference to where this creature is legally defined or what is the nature of his or her training or certification. It deals with the angle of repose of slopes. It discusses the introduction of blasting and the use of explosives.

Order 47(1) reads:

"Where an employee is likely to be exposed to unstable earth or cave-ins in an area where there are banks more than four feet high, such banks shall be shored, laid back to a stable slope or provided with any other adequate means of protection".

It concludes in Order 61,

"A person who contravenes the provision of this

Order is guilty of an offence and liable on summary conviction to a fine of \$1,000 or to imprisonment for six months or to both such fine and imprisonment".

2.3 The Mines, Borings and Quarries Act, Chap. 61:01

This is the next piece of significant legislation. It is now listed as Chap. 61:01 of the Laws of Trinidad and Tobago, earlier known as Act 13 of 1907. This piece of legislation has undergone several amendments.

Act 37 of 1908	Act 19 of 1948
Act 8 of 1923	Act 36 of 1952
Act 36 of 1943	Act 45 of 1979

This is an "Act to provide for the Regulation of Mines, Borings and Quarries".

Section 19(1) creates an obligation such that, "(a) loss of life or any personal injury whatever to any person employed occurs by reason of any explosion of gas or of any explosive material or of any steam boiler . . . the owner, agent or manager shall, within 24 hours next after the explosion or accident send notice in writing . . . to the Inspector . . ."

Section 22(1) grants powers to the Inspector to carry out examinations, enquiries or inspect such sites.

Section 23(1) grants powers to the Court upon complaint by the inspector, to prohibit the use of parts of the works or machinery, require the owner, agent or manager to take steps to remedy the danger or to prohibit the use of the mine, boring or quarry until in the opinion of the contractor the danger has been remedied.

The Act empowers the Minister responsible to make regulations for the safe working of mines, borings and quarries, subject to affirmative resolution of parliament. It further makes provision for penalties to be exacted from owners, managers or agents for operating a site in a manner that could endanger the safety of persons employed.

Regulations for the safety of quarries were subsequently drafted (Quarry Regulations) which dealt with prevention of dangerous falls and blasting and the storing of explosives.

2.4 The Workmen's Compensation Act Chap. 88:05

This Act which seeks "to provide for the payment of compensation to workmen for injuries suffered in the

course of their employment", was first introduced as Act No. 24 of 1960. Its focus is not on safety *per se* but on compensation after injury. It is introduced here only for completeness since it does not fall under the strict focus of construction safety.

It begins first by identifying a class of persons who shall not be regarded as workmen for the purpose of the Act. It next treats with the question of liability for compensation and the quantum of compensation. The Act also creates a duty in the employer to "defray the reasonable expenses to an account not exceeding \$500 under each head reasonably incurred by a workman who has suffered personal injury as a result of an accident arising out of and in the course of his employment . . .".

The Act also addresses the question of compensation in respect of occupational diseases. It raises the question of compulsory insurance such that, "subject to this Act, it shall not be lawful for any person to employ any workman unless there is in force in relation to the employment of that workman a policy of insurance, but this subsection shall not apply where the employer is the Government of Trinidad and Tobago".

2.5 Compensation for Injuries Act, Chap. 8:05

Originally Act 26 of 1896 and later amended by Act 6 of 1976 and Act 50 of 1976, this Act seeks to provide for compensation in cases of accidental death in general. The Act reads,

"Whenever death of any person is caused by some wrongful act, neglect or default, and the act, neglect or default is such as would before the commencement of this Act (if death had not ensued) have entitled the party injured to maintain an action and recover damages in respect thereof, then and in every such case the person who would have been liable if death had not ensued shall be liable to an action for damages, notwithstanding the death of the persons injured, and although the death shall have been under such circumstances as amount in law to an arrestable offence".

While this Act should have been invoked in construction deaths, the sector seems oblivious of it.

2.6 Recent Legislative Initiatives

One can hardly conclude that there is a great volume of legislation that treats with safety within the sphere

of industrial activity, far less within the construction sector. What exists does not adequately treat with the problem. There are several sections of the body politic that one would have thought would have been motivated to demand better legislation which would keep pace with technological development and the vast increase in construction.

Several pieces of legislation have been drafted in response to accidents and deaths, and agitation within the trade union movement. Some of these initiatives have actually reached the parliament. There have been several drafts of a Bill to replace the present Mines, Borings and Quarries Act. These have remained within the Ministry responsible for mining and quarry operations, i.e., the Ministry of Petroleum and Mines/Ministry of Energy. What little of its content that has entered the public domain would suggest the focus was on quarry lands allocation and operation and was not on increasing the safety aspect.

A replacement for the Factories Act has also been worked on in several editions. The last of the series was a Bill entitled, "An Act Respecting the Safety, Health and Welfare of all persons in relation to the activities of industrial establishments" (1984). The Explanatory Note to the Bill purports to "extend the present law (of 1948) to keep pace with the country's rapid industrialisation". New and improved measures were included relating to welfare facilities for persons employed. These included "the provision, at no expense to such persons, of adequate and easy supplies of drinking water, washing facilities, accommodation for clothing, sitting facilities, first aid appliances, canteens and restrooms". Two other important innovations were to be introduced, "the first, the requirement that every existing industrial establishment be registered and the second that the construction plans of all proposed industrial establishments be submitted to the Chief Inspector for his approval".

We must note that like its predecessor, the Factories Ordinance, this Bill was not designed with the construction sector or the construction site at centre stage. Needless to say, there was considerable opposition to the Bill by the representatives of business who contended that the changes would have made business operation unattractive, if not unprofitable. Since the 1984 Bill, no other pieces of safety legislation have successfully exited the parliament. We must remember that by 1984, the economy and construction

activity had already begun to slow down and over the next 10 years we were to witness progressive and severe economic contraction.

2.7 Safety in the Use of Asbestos

Another very interesting question relating to worker safety in construction is the issue surrounding the continued use and uncontrolled removal of asbestos in buildings. There has been no legislation in respect of a prohibition on the use of asbestos but the practice has been almost completely stopped. Nevertheless, the risk to both construction workers and the general population remains. Asbestos has been removed from structures as part of general repairs and demoliion and some of this has been a conscious but clandestine effort to remove this carcinogen from the built environment. Because there has been no legislation requiring specially trained and equipped contractors for the removal of asbestos, the material has quietly been removed over the last two decades by unsuspecting workers, ill-prepared and ill-equipped. The material is then disposed of on sites together with the rest of the general household solid waste. The result is that the entire society is put at risk but particularly those unfortunates who salvage these unprotected sites.

The first case of disease caused by asbestos was reported in the international medical literature as early as 1924. Since then, the body of medical research related to the nature of the disease, particularly the symptoms, has become monumental. The trade union struggle itself in this area has been bitter and protracted. The body of case law in the USA where the main legal fight has been staged, has been substantial and the judgements have not always been consistent. Nevertheless, it is generally held today that asbestos fibres and asbestos products are highly carcinogenic. It was reported in the Ramazzini Newsletter [2, 1990] coming out of the Collegium Ramazzini Conference on "The Third Wave of Asbestos Diseases", as follows:

"We have recently entered a new phase of asbestos exposure, which may prove to be as difficult as any we have experienced so far". The report described Phase 1 as the manufacture of asbestos products where, "the first set of hazards was associated with the mining of ore and the manufacture of asbestos products. It began before 1920 - 1930 and continued to 1980. Its legacy of disease and death is still with us. In retrospect, this problem as relatively simple, small populations

exposed to readily controlled point sources".

Phase 2 was described as the use of asbestos products. This period "was marked by the use of asbestos products; much larger groups of workers were involved: there were more insulators than employees in asbestos factories, and hundreds of thousands of shipyard workers (millions in WWII). Conditions of exposure were far more complicated, frequently changing, not easily amenable to the industrial hygiene engineer's skills".

Phase 3 was described as "Exposure to asbestos in place". The conference reports had this to say, "Just when we thought we had encompassed a bad experience, with a legacy of disease still to be suffered, nature presents us with another unhappy surprise. Now we find ourselves faced with disease among people exposed to the dust from asbestos products put in place between 1930 - 1980, in ships, factories, railway cars, powerhouses, buildings, boiler rooms, even homes and automobiles, long-lasting but not immortal, the products eventually begun to deteriorate with use, damage and vibration. Where this happens, fibres are shed, sometimes in considerable amounts".

The conference brought to light additional concerns of the first and second wave of asbestos diseases recommencing in developing countries. It even had to recognise the appearance of a fourth wave, where in Columbia and South Africa the material from the mines were being used in the construction of earthen houses or for making sun-baked bricks. Yet again, there were villages erected in close proximity to these abandoned mines. The fifth wave of asbestos disease was linked to the unprotected removal of asbestos from the built environment. We in Trinidad have over the last decade and a half been exposed to this last wave and no legislation has been proposed to deal with the menace.

2.8 National Insurance Act, Chap. 32:01

Previously Act 35 of 1971 and amended by Act 27 of 1974 and Act 27 of 1977, the Act in Section 36(1) reads,

"There is hereby established a system of compulsory national insurance under which subject to subsection 2 employed persons registered or eligible to be registered shall be insured against loss of earnings occasioned by any of the several contingencies in relation to which benefits are provided under Section 46(1). Section 46(1) lists the benefits accruing to

insured persons, which include sickness benefit, maternity benefit, invalidity benefit, funeral grant, retirement pension, retirement grant and survivor's benefit, invalidity benefit, funeral grant, retirement pension, retirement grant and survivor's benefit. The Act creates several benefit funds including the Employment Injury Benefit Fund. The Act insures against industrial diseases. Section 47(1) reads:

"Insurance against personal injury arising out of and in the course of employment shall include insurance against any prescribed disease and against any prescribed personal injury not so caused being a disease or injury caused by the nature of the employment".

2.9 The Explosives Act, Chap. 16:02

Originally Act No. 15 of 1907, this Act relates to the storage and transportation of explosives. Because the principal user of explosives in Trinidad and Tobago is the quarry industry, this Act is of some significance to the construction sector. The safety issue is not only restricted to quarry personnel, but as was demonstrated in a recent explosion of an explosives storage magazine and the loss of life of more than 10 security staff members, this issue has once more grasped national centre stage. The findings of the Commission of Enquiry set up into this incident in 1988 have not yet been made public. The Act has been amended on several occasions but a more modern or up-to-date piece of legislation is still being awaited. (Amendments: Act 31 of 1916, 22 of 1924, 16 of 1925, 29 of 1925, 14 of 1933 and 39 of 1942).

2.10 Employment of Women (Night Work) Act, Chap. 88:12

This piece of legislation, originally listed as Act No. 3 of 1939, seeks to prohibit the employment of women during the night in industrial undertakings. This Act can be and has occasionally been employed in excluding women from industrial-based employment because the job in question may involve night or shift work. The Act also defines what industrial undertakings are as,

- " (a) Mines, quarries and other works for the extraction of minerals from the earth.
- (b) Industries in which articles are manufactured, altered, cleaned, repaired . . ."

- (c) Construction, reconstruction, maintenance, repair, alteration or demolition of any building, railway, tramway, harbour, dock, pier, canal, island waterway, road tunnel harbour, bridge, viaduct, sewer, drain, well, . . . as well as the preparation for or laying the foundation of any such work or structure".

Nightwork is defined as work "during any portion of a period of 11 consecutive hours including the hour of ten o'clock in the evening and five in the morning".

Those who have argued in favour of this piece of legislation spuriously claim that it is in the interest of the health and personal safety of women workers. In spite of more than 10 years of protest submissions to the Law Commission, and the Office of the Attorney General, no action has been taken in this regard. The law remains on the books.

2.11 Environmental Management Act, No. 3 of 1995

This Act provides for the management of the environment within Trinidad and Tobago through the establishment and operation of an Environmental Management Authority, an Environmental Trust Fund and an Environmental Commission, defines the powers and duties thereof, and provides for related matters. In this respect, the Act is only peripheral to the question of health and safety of construction workers.

3.0 SUMMARY

The Legislation cited so far falls under the following classifications:

- **Central/Pivotal Safety Legislation**
 - (i) Factories Ordinance
 - (ii) Mines Boring and Quarries Act, Chapter 61:01
- **Secondary Safety Legislation**
 - (i) The Explosives Act, Chapter 16:02
- **Compensation for Damages Legislation**
 - (i) Workmen's Compensation
 - (ii) Compensation for Injuries Act, Chapter 8:05
- **Peripheral or Supporting Legislation**
 - (i) National Insurance Act, Chapter 32:01
 - (ii) Employment of Women (Night Work) Act, Chapter 88:12
 - (iii) Environmental Management Act No. 3 of 1995

In summary, the following points are noted:

1. There has been no legislation drafted specifically to deal with construction sites or construction safety during or since the construction boom period except the Factories (Protective Measures) Order, 1977.
2. Whatever legislation that does refer to construction, *en passant*, was specifically designed for factories or mines and borings.
3. The number of serious accidents during the boom and since, has continued to generate great concern within the population. But several instances of construction related deaths have had little or no legislative response. Some of these accidents and deaths have had little or no legislative response. Some of these accidents and deaths are either not tabulated or do not appear under construction-related sectors.
4. Some attempts have been made to draft replacement legislation, most notably the Factories Bill which actually reached Parliament but was not passed and nothing has resulted. Urgent action is needed in this direction.
5. There is strong evidence to suggest that since the construction boom period reporting of accidents has not received much attention in construction-related sectors.
6. Inspection of construction sites is not a frequent occurrence as many jobs are completed with no notification to the factories inspectorate.

4.0 CONCLUSIONS

1. There is need for separate legislation which focusses specifically on a construction inspectorate or division as distinct from the factory inspectorate. This can monitor and supervise construction works.
2. While the focus of this paper has been on health and safety of workers, the question of construction safety must include damage to adjoining structures, to collapse of existing structures, to works in progress and to construction equipment and machinery. We must remember that long delays and the lower productivity levels associated with unsafe construction sites, or sites with a record of accidents, or a vulnerability to accidents, all tend to produce an adverse effect on morale and work output.
3. There is a need for the updating of all the pieces of legislation referred to particularly because of the impact of technology, increased sophistication in construction techniques and the demands of modern construction.
4. There is need for legislation on the removal of asbestos in construction particularly since asbestos continues to be used in water pipes.
5. There is a need to improve the present system of monitoring and reporting of construction and related accidents.
6. There is need for greater levels of training in safety on construction and related areas particularly because of the significant volume of unskilled and semi-skilled labour involved.
7. The high volume of accidents must be reduced by a greater reliance on safety devices, e.g., nets, rails, harnesses for climbers, checking of scaffolding and formwork, appropriate clothing and protective gear, and the inspection of construction sites by the factory inspectorate as the law at present requires.

8. There is little or no reporting of the commencement of construction works as the law requires. There is need to enforce this.

REFERENCES

1. Ramazzini Newsletter. Produced by the Collegium Ramazzini. Published by Instituto de Oncologia e Scienze, Carpi, Italy, No. 2, 1990.
2. Commission of Enquiry into all Circumstances Relating to an Explosion at Camp Omega. Trinidad and Tobago, 1988.
3. The Factories (Protective Measures) Order, 1977 made by the President under Section 34 of the Factories Ordinance, Ch. 30, No. 2. Revised Ordinances 1950. Government Notice No. 210, Republic of Trinidad and Tobago.
4. Factories Ordinance. Chap. 30, No. 2, Revised Ordinances, 1950. Laws of The Republic of Trinidad and Tobago.
5. The Engineering Profession Act, 1985, Act No. 34 or 1985. Laws of The Republic of Trinidad and Tobago.
6. The Mines, Borings and Quarries Act. Chap. 61:01. Laws of the Republic of Trinidad and Tobago.
7. The Workmen's Compensation Act Chap. 88:05. Laws of the Republic of Trinidad and Tobago. 1980 ed.
8. Compensation for Injuries Act, Chap. 8:05. Laws of the Republic of Trinidad and Tobago. 1980 ed.
9. Draft Bill. An Act Respecting the Safety, Health and Welfare of all Persons in Relation to the Activities of Industrial Establishment (1984). The Government Printery. Republic of Trinidad and Tobago.

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| 10. National Insurance Act, Chap. 32:01. The Laws of the Republic of Trinidad and Tobago, 1980 ed. | 12. Employment of Women (Night Work) Act Chap. 88:12. The Laws of the Republic of Trinidad and Tobago. 1980 ed. ■ |
| 11. The Explosives Act, Chap. 16:02. The Laws of the Republic of Trinidad and Tobago. 1980 ed. | |