

**THE HIGH COURT****[Record No. 2012 242 P]****BETWEEN****GERARD WATTERS****PLAINTIFF****AND****DUNNES STORES****DEFENDANT****JUDGMENT of Mr. Justice Binchy delivered on the 27th day of October, 2015.**

1. In these proceedings the plaintiff claims damages in respect of personal injuries which he claims he sustained in an incident alleged to have occurred at his place of employment on 20th March, 2011. The plaintiff claims that while in the course of using a cardboard compactor and baling machine, he received a very strong electric shock, entering through his right arm and existing through his right foot. The plaintiff claims that as a result he sustained injuries to his right arm resulting in a permanent feeling of numbness between the elbow and wrist of his right arm as well as a minor burn in the sole of his right foot. The occurrence of the incident and the injuries which the plaintiff claims he sustained as a result are denied by the defendant.

**Plaintiff's Evidence**

2. The plaintiff, who as born on 9th July, 1984, had been working for the defendant for a period of approximately fifteen months on the date that the accident is alleged to have occurred. He worked and continues to work in the capacity of a general assistant and store man, on a part-time basis, for about fifteen hours per week. Part of his duties included taking cardboard boxes into a warehouse for disposal. He was required to place the empty boxes in the baling machine which compacts the boxes, and once the waste bin is full of compacted cardboard, it is tied, baled and removed for disposal from the premises. However, the only function the plaintiff had and for which he had been trained was to load the cardboard into the machine and to press the start button on the electrical control device, which is affixed to the machine, in order to compact the cardboard. He had no role in the removal of the compacted cardboard from the machine.

3. It is the plaintiff's claim that on Sunday 20th March, 2011 he attended for work at 3.00pm and approximately twenty minutes later he brought a load of cardboard to the baling machine and proceeded to load it into the machine as usual. Once he had put in as much cardboard as would fit, he closed the cage on the machine and pressed the start button on the control panel/device with his right index finger. The plaintiff claims that he immediately felt a very bad shock in his right arm and that his arm went numb. He describes his body as having become frozen momentarily and he said that his arm went a purple colour. He called another member of staff, a Mr. Rob Wallace and told him what had happened. He also told a Ms. Fiona O'Connell, the duty manager of the plaintiff. Initially, the plaintiff felt that he could continue working but about twenty minutes or so later he was still feeling unwell and he met Mr. Damien MacAodha, another employee of the defendant and told him what had occurred and that he was feeling unwell. Mr. MacAodha then brought the plaintiff to hospital. After examination, the plaintiff was released from hospital without any medication or treatment.

4. The plaintiff claims that he also had a small burn mark on the bottom of his right foot and this was noted upon examination in the hospital. He said that it was about the size of a small coin and was located in front of the ball of his foot. He said that this area was very sore for about a week after the accident.

5. The plaintiff gave evidence that he could not move his arm for a number of weeks after the accident and that he had no feeling in his arm. He said that he attended physiotherapy to try to assist in recovery, and that while he has regained full functionality in his arm, it remains numb and he has to be very careful not to cause injury to his right arm. He was unable to return to work for 24 months following the accident, of that, he attributes 12 to the accident and 12 to other causes. During which period of time he did not receive any pay from the defendant. He claims a loss of net income in the region of €150/€160 per week.

6. On cross examination the plaintiff agreed that the start button is made of plastic which has insulating characteristics that would protect him from shock. He added a concern that upon pressing the start button with his right hand he was at the same time holding the handle of the metal baler cage with his left hand. He confirmed that he was wearing ordinary shoes with rubber soles.

**Medical Evidence**

7. Dr. Brian McNamara, Consultant Clinical Neurophysiologist, gave evidence on behalf of the plaintiff. He said that he viewed the plaintiff, at the request of the plaintiff's general practitioner, on 28th March, 2012. He performed nerve conduction studies on the plaintiff's right upper limb. These studies showed slowing of median motor conduction across the right wrist and slowing of ulnar nerve conduction across the right elbow, consistent with a moderate injury to or compression of the median nerve at the wrist and ulnar nerve at the elbow. While he could not be certain as to the cause of these nerve problems, he said that his research indicated that there have been cases of such injuries recorded through electric shock, and without significant burns. He considered the injury to be moderate and opined that what he considered to be peripheral nerve problems will cause pain and mild disability as a result of loss of dexterity in his hands. The plaintiff himself however is not complaining of any discomfort in his hand or upper limb.

8. Dr. McNamara considered whether or not the plaintiff might be suffering from carpal tunnel syndrome, but he considered this unlikely because that condition normally afflicts females or when in males, it usually occurs in males older than the plaintiff. It also occurs in people who have a relevant history, which the plaintiff in this case does not have. Moreover, Dr. McNamara said that it would be rare for ulner nerve damage to occur at the same time as medial nerve damage in carpel tunnel syndrome.

9. Dr. McNamara agreed that the plaintiff's presentation of his condition was unusual. It was put to Dr. McNamara that the consultant who examined the plaintiff on behalf of the defendant, namely Dr. Connolly, considered that the plaintiff had, as of the date of examination by Dr. Connolly, made a full recovery from the nerve damage identified by Dr. McNamara. Dr. McNamara accepted that if Dr. Connolly found this to be so he had no reason to dispute his findings, and said that there was enough time between the dates of

examination by Dr. McNamara himself and Dr. Connolly to the plaintiff, to make a full recovery.

10. It was further put to Dr. McNamara that while the plaintiff complained that the entire circumference of his upper limb was numb, that this was inconsistent with the findings of Dr. Connolly, who considered that such a complaint was itself inconsistent with the nerve distribution in the area. In reply to this point, Dr. McNamara stressed the complexities involved in the tests and also said that there are small patches of skin covered by smaller nerves where it's not usually possible to record from the nerve. He said that in his opinion it can be very difficult and, in his own words, "unwise" to try to make a direct correlation between the results of nerve tests and the symptoms as relayed by a patient. On the balance of probabilities, he felt the plaintiff sustained nerve injuries to his right arm in the manner alleged and that the plaintiff was still suffering from the sequelae when examined by Dr. McNamara 12 months later. In the words of Dr. McNamara, this is the most likely hypothesis for the plaintiff's condition.

11. Dr. Sean Connolly, Consultant in Clinical Neurophysiology gave evidence on behalf of the defendant. He examined the plaintiff on 14th May, 2015 and could find no abnormalities in the plaintiff's right upper limb such as would confirm the plaintiff's symptoms as described by the plaintiff on that date when he informed Dr. Connolly that he had no feeling at all in the right forearm between wrist and elbow.

12. Additionally, he said that the description the plaintiff gave of numbness around the entire circumference of his right upper limb is inconsistent with the anatomic pattern of nerves, and he considered the plaintiff's complaints do not conform with the usual symptoms that would be associated with peripheral nerve injuries i.e. injuries other than those associated with the central nervous system.

### **Previous Medical History**

13. The plaintiff did suffer from psoriasis for a period of more than ten years prior to the date of the incident complained of in these proceedings. The plaintiff also had a brain scan in 2010 which was found to be normal. Dr. McNamara in his evidence confirmed that neither the psoriasis nor the complaint that gave rise to the brain scan were of any relevance to the plaintiff's complaints in these proceedings.

### **Hospital Admission Notes:**

14. An extract from the plaintiffs' hospital admission notes was handed into Court. This confirmed the plaintiff's admission to hospital on 20th March, 2011, at the time of 16.53 hours. The notes taken by the triage nurse states:

"Electric shock to right hand at 3.30pm. No feeling to mid-forearm to ROM of hand. Also c/o pins and needles right foot. No sign of entrance/exit wounds. Denies any pain."

15. The notes taken by the doctor who attended the plaintiff at 19.00 hours echo the same complaints. They also stated:

"Input in R hand; output in R foot – aftershock pins and needles along R. leg. R. hand is weak; can't feel touch in forearm and hand; pins in needles in R. hand and forearm. R. foot – pins and needles; no [illegible]; no palpitations. Vomited once in A&E."

16. The plaintiff stated in evidence that he vomited in A&E.

### **Technical Evidence**

17. Following upon the report of the incident by the plaintiff, the defendant arranged for the baling machine to be inspected by Mr. Thomas Quirke, registered electrician, who conducted his inspection of the machine on 22nd March, 2011, having been told that there might be a problem with the baling machine, but no more. Mr. Quirke gave evidence that he isolated the machine and tested it and specifically tested the earthing from the machine, which he said gave a very good reading. He started up and tested the machine and confirmed that everything was working satisfactorily and that he could identify no fault with the machine.

18. It was accepted by the plaintiff that this machine had at all times operated satisfactorily for the plaintiff, and that he had used the machine "anything up to ten times per day", without incident, since commencement of his employment with the defendant approximately fifteen months prior to the accident alleged. The plaintiff's consulting engineer, Mr. Denis O'Mahony, confirmed that when he attended to inspect the machine on 11th December, 2014 he found it to be in perfect working order and was unable to identify any faults which might have given rise to the kind of incident complained of by the plaintiff, other than that he did not consider it to be satisfactorily earthed. In this regard however, Mr. O'Mahony stated that he formed this opinion base upon a visual examination and that he did not conduct any tests to corroborate his opinion.

19. Mr. O'Mahony identified three principle criticisms of the baling machine:

1. The machine did not bear the obligatory CE mark demonstrating compliance with all relevant European Safety Standards and Regulations;
2. The control panel operating voltage was what is known as low voltage, whereas extra low voltage i.e. voltage at less than 50 volts a.c. is now more common in control panels and
3. The standard of earthing/bonding on the panel was not up to the standard normally evident in similar such panels.

20. Dealing with the first issue i.e. the CE certification, the machine was manufactured in the United States. According to Mr. O'Mahony, the labelling on the machine indicates that it was manufactured to American standards, and the American voltage system differs both in voltage rating and frequency to the European system.

21. Mr. O'Mahony did observe in his report that one label on the control panel indicated that the unit was produced for use in a European 400 volt/50 hz electrical system and that may indicate that it was specifically manufactured or altered to work in a European voltage system.

22. In reply to this point, the defendant's consulting engineer, Mr. James Molloy agreed that there was no CE labelling or certification on the machine. Accordingly, he attempted to establish the nature of the declaration of conformity issued by the baler manufacturer, Load King Manufacturing Company Inc., in order to validate attaching the CE mark to an item of electrical equipment, such as the baling machine in this case, in order to authorise the release for sale and use of such a machine in the European market. Mr. Molloy was unable to trace a declaration for the specific machine, but the UK importing agent submitted an example of a declaration for a similar baling machine which certifies compliance with European laws for electrical equipment of machines. Upon his examination of the

machine Mr. Molloy found that it met compliance with the European standards relating to electric shock prevention. For practical purposes therefore, notwithstanding that the machine did not bear the obligatory CE mark, Mr. Molloy opined that it is very likely that the machine was manufactured in compliance with relevant European Safety Standards and Regulations and this was not seriously disputed by Mr. O'Mahony, other than to raise the query by reference to the absence of the CE mark.

23. The second point made by Mr. O'Mahony is that the machine does not have extra low voltage installed as a result of which it is possible that the plaintiff could have suffered an electric shock if an escape of electricity occurred. The effect of the installation of such a device on this machine would be to reduce the exposure of a shock caused by 110 volts of electricity (the voltage to which the machine was operating) to 50 volts or less. Mr. O'Mahony gave evidence that the installation of such devices, while not required by regulation, had become commonplace in recent years and that such a device could be retro fitted to the baling machine at a cost of not more €1,000. When asked whether it was common practice to use low voltage systems, Mr O'Mahony confirmed that manufacturers have for some years supplied control devices with extra low voltage.

24. On cross examination, Mr. O'Mahony agreed plastic would be an insulator but that the accident could have occurred by any inadvertent contact with exposed metal including the surround of the "start" button when depressed.

25. In reply to this Mr. Molloy on behalf of the defendant stated that the installation of such equipment typically occurred in high risk environments, such as in saunas and swimming pools. He agreed that ELV has become more commonly used in recent years because a lot of electrical equipment now needs less electricity to operate. He said that if you where to change the baling machine (and control panel) today you would change to a system that incorporates ELV but that does not mean there is anything wrong with the existing baling machine which is operating perfectly satisfactory.

26. The third complaint advanced on behalf of the plaintiff by Mr. O'Mahony is that the standard of earthing/bonding on the control panel was not up to the standard normally evident in similar panels. Specifically, he stated that he could find no definitive earth strap linking the panel door to the panel body or any clear earth strap linking the panel backboard to the panel body. He also noted that there is a bolt connecting the panel backboard to the panel body and the panel body to the frame of the machine that relies solely on a friction connection, which can be compromised by paintwork or rust/corrosion. Furthermore, he stated that it wasn't clear that serrated washers had been used to guarantee a suitably secure comprehensive electrical connection between the components, which is necessary to ensure a complete and proper path to ground for any spurious electrical current that may arise in any one or all of the above mentioned components. What all of this means, according to Mr. O'Mahony, is that the path to ground/earth on the machine and control panel does not appear to be as complete on this particular machine and control panel as would normally be the case. As previously stated, this opinion was based on a visual inspection only, and not upon any tests undertaken by Mr. O' Mahony.

27. In response to a question as to whether or not proper earthing makes a machine completely safe, Mr. O'Mahony said that proper earthing is just one of the factors to take into account in considering the safety of electrical appliances. He said there is always a risk that electricity can stray through a secondary path and that this is known to manufacturers of electrical equipment. He said that this can occur on a random basis and it does not necessarily occur again, and for this reason it is safer for equipment such as this to be fitted with extra low voltage (ELV) which has the effect of reducing the voltage exposure as described above.

28. In his response to Mr. O'Mahony's criticisms of the earthing of the machine, Mr. Molloy states that the machine is adequately earthed and that the equipment within the machine and control panel is clean and dust free and is in accordance with the requirements of national rules for electrical installations, in that all live parts had been adequately insulated. Furthermore, in the case of an electrical fault, the machine has been equipped with an automatic disconnection of the electrical supply within 0.5seconds. Also, on his inspection, Mr. Molloy found that all metal work was bonded as required by the regulations.

29. Mr. Molloy stated that the tests carried out by Mr. Quirke the electrician who examined the machine on 22 March, 2011 demonstrated that no faults existed in the control device as of the date of testing i.e. 22nd March, 2011.

30. Evidence was also given by Mr. Molloy that the defendant has a maintenance contract in place for all baling machines in their stores and that this particular baler had been inspected on 9th August, 2010 and was found to be in correct working order.

31. It was not disputed by the plaintiff that the machine was found to be in perfect working order upon testing and that no faults with the machine or the control device were identified. The principal complaint advanced by the plaintiff against the defendant from a technical point of view related to the failure to have the control device equipped with ELV.

### **Decision**

32. The plaintiff gave his evidence in an honest and understated manner. He did not appear to exaggerate his injuries in any way. He confirmed that he had full functionality in his arm, but was left with numbness.

33. The plaintiff had no relevant pre-accident medical condition. His injuries are consistent with an electrical shock.

34. Although the cause of the injury is uncertain, I am satisfied as a matter of probability that the plaintiff sustained the injury complained of in the manner that he alleges.

35. Since the machine was in perfect working order the only possible explanation for the occurrence of the electric shock on this occasion was a random escape of electricity which is in itself unexplained in the circumstances. From the evidence that was given on behalf of the plaintiff, it would appear that such escape of electricity is normally in the nature of what is referred to as stray current.

36. There is no other likely explanation for the nature of the injury sustained by the plaintiff and which has been clearly identified by Dr. McNamara. Notwithstanding the fact that the start button on the baling machine/control panel is made of plastic and that it affords the plaintiff protection against electric shock (and that some measure of additional protection may have been afforded to the plaintiff by his footwear). I think, on the balance of probabilities, it is likely that the plaintiff must have come into contact with some metallic part of the baling machine or the control device when operating it, whether that was around the start button itself (which, when depressed, exposes the finger of the person operating it to metal), or the plaintiff's left hand holding the cage, or some other part of the plaintiff's body inadvertently coming into contact with the metal surface of the baling machine/control device.

37. Two days after the event, upon inspection by Mr. Thomas Quirke, Electrician, the machine was found to be in perfect working order. The plaintiff himself confirmed that he had never encountered any difficulties in operating the machine previously and that he was unaware of any similar occurrences involving other personnel in the use of the machine. I am satisfied that the defendants appear to have a maintenance regime in place for the machine and it was proven that the machine had been inspected by maintenance contractors for the defendant some seven months prior to the date of the accident.

38. It is common case that the machine was manufactured in the United States and that it was supplied without the CE Certificate normally required for the importation of electrical equipment into the European Union. Mr. Molloy, the engineer for the defendant, gave evidence that he thought it likely that the machine was manufactured in compliance with relevant European Safety Standards and Regulations, but could put this point no further. He did however say that the machine appears to have been assembled and maintained in accordance with the requirements of national rules for electrical installations, in that all live parts had been adequately insulated. However, Mr. O'Mahony, the plaintiff's consultant, did not agree that the path of electricity to ground/earth on the machine was complete, the court must prefer the evidence of Mr. Molloy in this regard because on his own evidence Mr. O'Mahony confirmed that he did not carry out a specific test to determine whether or not the earthing system in the baling machine was properly installed and maintained.

39. The principal hypothesis of Mr. O'Mahony in relation to the cause of the accident is that it probably occurred owing to an incidence of stray voltage. Mr. O'Mahony's evidence was that such incidents can occur and that the effect of the same can be minimised or even eliminated by the installation of extra low voltage in the control device. In his evidence, Mr. Molloy accepted that since purchase of the the baling machine by the defendant (which it is believed was in or around the year in 2000), ELV is now commonplace and that if purchasing such a machine today one would purchase a device with ELV. He did not dispute Mr. O'Mahony's evidence that ELV can be retro fitted at a cost not exceeding €1000.00.

40. From the above, I conclude that while the baling machine including the control device were in perfect working order at the date of the accident, it was nonetheless susceptible to the occurrence of stray voltage which, while not common place, is a known phenomenon. I further conclude that any risks associated with that phenomenon could in recent years have been reduced or eliminated by the installation of ELV at modest cost.

41. The question of law that arises out of the above findings is whether or not an employer can be liable to an employee for an injury found to have been sustained in circumstances where the machine which he was operating was properly maintained and in good working order, but was not fitted with technology that has become readily available since the purchase of the machine.

42. Counsel for the defendant, Mr. MacGrath SC, argues that to impose liability in such circumstances amounts to the imposition of strict or absolute liability upon the defendant. He submitted that in cases where there has been a finding of absolute liability against defendants arising out of the use of equipment it has invariably been the case that the equipment has been found to be faulty. Mr. MacGrath SC submitted that the plaintiff's case in this instance, even at its height, does not go so far as to suggest any fault in the baling machine or control device. Mr. MacGrath SC referred to the recent decision of the Supreme Court, delivered by Ms. Justice Dunne, on 5th March, 2015 in the case of *Vincent Thompson v Dublin Bus and South Dublin County Council* [2015] IESC 22. In that case the plaintiff sustained an injury when the pneumatic suspension of the bus that he was driving on behalf of the first named defendant failed when he was travelling over a ramp constructed by the second named defendant, as a result of which the plaintiff sustained injuries to his neck and lower back. In the High Court, De Valera J. found that there was sufficient evidence to establish that a proper regime of inspection and maintenance where carried out by the first named defendant upon the bus being driven by the plaintiff and the question for determination by the court was whether or not Regulation 19 of the Safety, Health and Welfare at Work (general application) Regulations 1993 ("the 1993 Regulations") imposed an absolute duty on employers in respect of the safety of equipment provided to employees for their use in the course of their employment.

43. The 1993 Regulations have been rescinded and replaced by the Safety, Health and Welfare at Work (general application) Regulations 2007 ("the 1997 Regulations"), but nonetheless the analysis of the obligations of employers under the 1993 Regulations is of assistance in this case.

44. Regulation 19 of the 1993 Regulations stated:

"It shall be the duty of every employer, to ensure that –

(a) The necessary measures are taken so that the work equipment is suitable for the work to be carried out or is properly adapted for that purpose and may be used by employees without risk to their safety and health;

(b) In selecting the work equipment, account is taking of the specific working conditions, characteristics and hazards in the place of work having regard to the safety and health of the employees and any additional hazards posed by the use of such of work equipment;

(c) Where it is not possible fully to ensure that work equipment can be used by employees without risk to their safety or health, appropriate measures are taken minimise any such risk."

45. In her decision, Dunne J. gave extensive consideration to the "Framework" directive on the introduction of measures to encourage improvements in the safety and health of workers at work which gave rise to the 1993 Regulations as well as to the authorities of the European Court of Justice concerning the interpretation of the directive and its transposition into the laws of this country and the United Kingdom. Dunne J. concluded:

"The obligation is to provide work equipment that is suitable for the work to be done. However, it is recognised that it is not always possible to ensure that work equipment can be used without any risk and consequently in Regulation 19(c) it is provided that the obligation in those circumstances is to ensure that appropriate measures are taken to minimise any such risk. The recognition of the fact that it is not always possible to ensure that when the work equipment provided is suitable for the use which is intended, it is not possible to guarantee that the work equipment can be used without risk and that consequently, the obligation is to take appropriate measures to minimise such risk, it seems to me to preclude the possibility of construing Regulation 19(a) and (c) as imposing absolute liability. I am reinforced in this view by virtue of the fact that criminal liability is imposed for a breach of the regulations."

46. She continued:

"On the facts of this case, it is difficult to anticipate what further steps could have been taken by Dublin Bus to prevent the collapse of the bus's suspension."

47. On the facts, Dunne J. found that Dublin Bus had taken the appropriate measures to minimise the risks involved arising from the use of equipment provided for use by its employees. Moreover, she stated that the obligations under the 1993 Regulations did not impose absolute liability on the employer.

48. Mr. MacGrath SC relies upon the decision in *Thompson* in support of his argument that the defendant in these proceedings could not have any liability to the plaintiff even if he sustained the injury in a manner alleged. He argues that it is not reasonable to expect an employer to deal with such a remote risk as described by the plaintiff and Mr. O'Mahony and that there was no evidence that the event which the plaintiff claimed to have occurred was foreseeable.

49. Mr. McMahon SC, for the plaintiff, in his submissions relies upon Regulations 32 and 76 of the 2007 Regulations. Regulation 32 deals specifically with control devices of the kind used by the plaintiff in this instance. In so far as is relevant, Regulation 32 provides:

"32(1) an employer shall ensure that –

(a) work equipment control devices which affect safety and health are clearly visible and identifiable and appropriately marked where necessary,

(b) control devices are located outside danger zones accept were necessary,

(c) the operation of control devices cannot cause additional hazard

...

(h) control systems are safe, and are chosen making appropriate allowances for the failures, faults and constraints to be expected in the planned circumstances of use."

50. Regulation 74 is contained in part 3 of the 2007 Regulations under the heading of "Electricity". In the interpretation section of that part, "danger" is defined as meaning risk of personal injury from –

(a) electric shock, electric burn, electrical explosion or arcing,

(b) fire or explosion caused by the use of electricity, or

(c) mechanical movement of electrically driven equipment,

and preventing danger in this Part shall be construed as preventing danger so far as is reasonably practicable."

51. Regulation 76 of the 2007 Regulations provides that:

"An employer shall ensure that –

(a) all electrical equipment and electrical installations are –

(i) designed,

(ii) constructed,

(ii) installed,

(iii) maintained,

(iv) protected, and

(v) used

so as to prevent danger..."

52. The 2007 Regulations are far more detailed and comprehensive than the 1993 Regulations. It may well be that that rationale that led Dunne J. to conclude that the 1997 Regulations do not impose a strict or absolute liability on employers for injuries sustained by an employee in the workplace arising out of the use of equipment provided by the employer does not apply to the 2007 Regulations or to specific obligations imposed under those Regulations, but this was not argued in this case. In any event however, it is not necessary to decide that issue for the purpose of these proceedings because it is clear that Regulation 76 of the 2007 Regulations imposes an obligation on employers to ensure that electrical equipment and installations are installed, maintained and protected so as to prevent danger, and the prevention of danger is to be construed by taking such measures as are reasonably practicable.

53. While a shock of the kind sustained by the plaintiff may be unusual, on the evidence of Mr. O'Mahony it is not unheard of, and it is clear that if the control device was fitted with ELV, (which Mr. Molloy agrees would certainly be fitted in any replacement control device and further agrees has become far more common in recent years) then the injuries sustained by the plaintiff would not have occurred at all. Mr. O'Mahony further stated in evidence that ELV could have been installed in the control device retrospectively, at a maximum cost of €1,000.00, and this part of his evidence was uncontested.

54. While no defect was identified in the baling machine or the control device, the fact is that any risks associated with stray or random current could have been eliminated almost entirely by the installation of ELV at a reasonable cost. The baling machine and control device were approximately ten years old at the time the incident occurred. I think it is reasonable to expect an employer such as the defendant in this case to review the suitability of its equipment (in the context of the safety of its employees) at periodic intervals to ensure that employees are only ever exposed to the minimum risks necessary for undertaking their duties, having regard to developments in technology and whether or not advances in technology are available at reasonable cost. Indeed, I am fortified in this view by a passage quoted by Dunne J. in *Thompson* from an opinion given by Advocate General Mengozzi in the case of *Commission of the European Communities v. United Kingdom of Great Britain and Northern Ireland* (Case C-127/05) [2007] ICR 1393. In that case what was at issue was the interpretation of the framework directive on the introduction of measures to encourage improvements in the safety and health of workers at work and in particular articles 5(1) and (4) of that Directive. While noting that the framework directive was not intended to impose duties on employers in absolute terms, he observed, inter alia, that the duties imposed by article 5(1):

"takes the form both of anticipation and assessing risks to the safety and health of workers resulting from the

undertaking's activities and of determining and taking the requisite preventive measures ... since technical progress and developments in the production systems may result both in the creation of new risks to the safety and health of workers and in the diversification and improvement of protective measures, the employer's duty to ensure safety must be interpreted as an evolving responsibility, requiring constant adjustment to circumstances which may affect the quantum and extent of the risks to which workers are exposed as well as the effectiveness of the measures required to prevent or reduce them".

55. It seems to me that the obligations imposed on employers under Regulations 32 and 76 of the 2007 Regulations should be similarly interpreted. It would in my view be inconsistent with the spirit of those regulations which has at its heart the safety of employees if they were to be interpreted in such a way as to free employers from any obligation to consider advances in technology which would serve to reduce the risks to which employees are exposed. That is not to say that employers are under a duty always to provide the best available technology regardless of cost. The obligation is to review the equipment provided at reasonable intervals and if there have been improvements in technology that enhance the standard of safety afforded to workers, then an obligation will arise to modify or replace the equipment in order to afford employees the best available protection, if that can be done at reasonable cost to the employer. As to what is reasonable costs, that will depend on the circumstances of the case. In my view, by failing to install ELV in the control device (or even to consider doing so, for there was no evidence to the effect that the defendant did so consider) the defendant failed in its obligations to the plaintiff under Regulations 32 and 76 of the 2007 Regulations, and accordingly I find for the plaintiff.

56. As to damages, the plaintiff's evidence was that he sustained an injury to his right arm and also a small burn type injury to his right foot. There was no evidence to corroborate the plaintiff's evidence regarding the burn injury to his right foot. As regards his arm, the plaintiff gave evidence that immediately after the incident it went a purplish colour. The plaintiff gave evidence that he felt a shock in his hand and arm and that his whole arm went numb. Later on, he was in shock and was sick (i.e. he vomited) in hospital. It was very sore for one week and he was off work for approximately twelve months after the accident owing to this injury. He had over ten sessions of physiotherapy. He said that for a while after the accident he could not move his arm and that he had no feeling, and still has no feeling in his right forearm. He also said that for a period after the accident he was afraid of using electrical appliances.

57. The plaintiff's evidence was supported by Dr. McNamara, to whom he was referred by Mr. Higgins, consultant orthopaedic surgeon. While the case was an unusual one, Dr. McNamara was able to confirm from objective tests that the plaintiff, at the time when he was examined by Dr. McNamara in 2012, exhibited signs of abnormal conduction in the nerves of his right arm consistent with his symptoms. Specifically, he found the plaintiff was suffering from a slowing of median motor conduction across the right wrist and slowing of ulnar conduction across the right elbow. He considered the possible causes for the plaintiff's complaints and ruled out one possible explanation, namely Carpal Tunnel Syndrome. He further stated that peripheral nerve problems of this kind are unusual in this age group, without a definite cause. His research indicated that this sort of nerve injury can occur after an electric shock..

58. While Dr. Connolly could find nothing wrong with the plaintiff, even if the plaintiff had made a full recovery by the time he was seen by Dr. Connolly in April 2015, in my view an appropriate measure of general damages is €40,000. The plaintiff was unfit for a period after the accident and attributed approximately twelve months of his absence from work (he was certified for a period of almost two years) to this accident. In the circumstances I will allow him special damages relating to his net loss of earnings during this period in the sum of €7,500.00.

**Counsel for the plaintiff:**

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