risk-taking to be endorsed. In the past few years, a process called partnering realignment has evolved to help stakeholders deal with problems arising during the project, rather than resolving them in court after the project is completed. This process, when embraced and carried through, has helped turn around troubled projects. Partnering realignment is a corrective process implemented during the project, to help organizations resolve issues, set a new course and maximize the remaining potential for success. It is an attempt to regain and retain control of the project and to plan ways of avoiding future problems.

4.2.2 Negotiation

Negotiation is a "process of working out an agreement by direct communication. It is voluntary and non-binding." The process may be bilateral (between two parties) or it could be multilateral (many parties). Each party may utilize any form of external expertise it considers necessary, and this is often described as "supported negotiating". This could refer to a focused discussion on the dispute among the engineers from all interested parties, with the intention of resolving differences without the involvement of third parties, as happens in the case of mediation and arbitration. Indeed, this is an informal process in the legal sense, but if an agreement is reached through the process, it may have the usual legal significance. The negotiation process is fast and does not involve additional expenses. The discussions are held between the parties across the table in a cordial and peaceful atmosphere.

4.2.3. Standing Neutral

i) Dispute Review Board

The concept of the Dispute Review Board appears to have developed in the USA. It is essentially a process where an independent board of three people evaluates disputes as they arise during the project and make settlement recommendations to the parties. The board is constituted at the commencement of the project, much like a panel of three arbitrators. Each party selects one board member. The parties may then agree on the third or, if they fail to do so, the two board members will select the third. The board periodically visits the site and receives project information to ensure familiarity with the project and the parties. The board meets regularly to discuss problems or disputes, hears presentations from the parties and suggests solutions. It seems that the main benefit of the DRB is that its mere existence helps to prevent disputes. The parties themselves become familiar with the board's view on particular issues which then aids the negotiation and settlement process which the parties undertake before presenting their dispute to the board[8].

ii) Dispute Resolution Adviser

The basic concept of a Dispute Resolution Adviser involves the use of a neutral third person who advises the parties to a disagreement or dispute and suggests possible settlement options. This concept is clearly similar to that of the Early Settlement Adviser. According to Wall the idea stemmed from Clifford Evans who, in 1986, suggested the use of an "independent intervener". The independent intervener would be paid for equally by the employer and contractor to settle disputes as they emerged, rather than wait until the end of the contract. The decision would be binding until the end of the project when either party could commence arbitration proceedings. Unlike the independent intervener the DRA does not make interim binding decisions, but advises on the means by which settlement could be achieved. The power to settle ultimately rests with the parties. There are a variety of benefits with such an approach. First, disagreements at site level can be addressed before a full-blown dispute develops. Not only does this avoid the breakdown in working relationships which could then affect the rest of the project's duration, but it also allows the issues to be dealt with whilst they are fresh in the parties' minds. Further, neither the parties nor the adviser are limited to a "legal" outcome in the sense that the settlement could encompass wider solutions mutually beneficial to the parties and the project.

4.2.4. Non-Binding Resolution

i) Mediation and Conciliation

Mediation and conciliation are essentially an informal process in which the parties are assisted by one or more neutral third parties in their efforts towards settlement. These mediators do not sit in judgment but try to advise and consult impartially with the parties with the object of assisting in bringing about a mutually agreeable solution to the problem. Naturally, under the conditions, they have no power to impose an outcome on disputing parties. Mediation and conciliation are voluntary in that sense that the parties participate of their own free will and a neutral third party simply assists them in reaching a settlement. The process is private, confidential and conducted without prejudice to any legal proceedings. The process is non-binding unless an agreement is reached. Of course, once an agreement is reached, and the parties have signed it, the document is as binding as any other agreement would be.

Although the process is largely informal, the following could be identified as parts or stages in a mediation process. In the pre-mediation stage, there has to be a basic agreement among the parties to the mediation process, including the identification of a mediator. Mediation could be direct or indirect, and could involve meetings with parties, presentations being made by them, putting together of facts, negotiations and a settlement. Finally, a mediator may also like to be involved in the process of compliance with the settlement reached. Given that mediation is an informal process, it has certain inherent advantages over the more formal and legal process. For example, it could be a lot less time-consuming and even involve lesser costs, and the outcome could be more satisfying to the parties, while also minimizing further disputes. It also opens channels of communication, and could contribute greatly to preserving or enhancing a professional relationship. Further, the exercise may be said to empower the parties and give them greater confidence in their ability to handle disputes[9].

ii) Adjudication

The term adjudication can be misleading. In its general sense it refers to the process by which the judge decides the case before him/her or the manner in which a referee should decide issues before him or her. More specifically, adjudication may be defined as a process where a neutral third party gives a decision, which is binding on the parties

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in dispute unless or until revised in arbitration or litigation. This narrow interpretation may refer to the commercial use of an adjudicator to decide issues between parties to a contract. The use of an adjudicator is found in a variety of standard forms of contract used in the construction industry. Until recently, adjudication in the construction industry has displayed certain characteristics. First, the adjudicator is a neutral individual who is not involved in the day-to-day running of the contract. He or she is neither an arbitrator, nor a state-appointed judge. Second, the adjudicator enjoys his or her powers by virtue of the agreement between the parties. In other words, the parties have agreed by contract that the decision of the adjudicator shall decide the matter for them. Third, the adjudicator's decision is binding on the parties, and therefore, unlike mediation, the process does not require the co-operation of both parties. Fourth, adjudicator's decisions are usually expressed as being binding until the end of the contract when either party may seek a review of the decision, most commonly by arbitration. Finally adjudication is not arbitration and is therefore not subject to the Arbitration Act 1996.

4.2.5. Binding Resolution

i) Arbitration

Arbitration is perhaps the most commonly used mechanism for settlement of technical disputes in a construction project. It is a quasi-judicial process to the extent that legal protocol is largely observed, and it is important that the arbitrator, who basically acts as a judge, understands legal procedures. In India, the Arbitration and Conciliation Act, 1996, provides the legal framework for the arbitration process. In principle, collection and interpretation of evidence, examination and cross-examination of witnesses, etc., are some examples of essentially legal matters, which an arbitrator needs to have a sound understanding of. However, a basic belief in principles of natural justice and a practical approach are a hallmark of a successful arbitrator. He should be able to guide and provide a direction to the proceedings, which could be quite tough, especially when the parties to the dispute are represented by professional lawyers. In fact, the law has now added a new dimension to the arbitration process by empowering the arbitrators to conciliate and help the parties in arriving at a fair compromise or an equitable settlement of the case before him. As far as the number of arbitrators is concerned, much like the judicial system, technical disputes can also be resolved by single arbitrators, or a panel of several arbitrators, and though the parties are free to determine the number of arbitrators, it should be ensured that the number is odd, so that a situation of a 'tie' in an award is preempted. Often, one arbitrator each is nominated by the contractor and the owner, and these individuals together choose a third colleague arbitrator, to complete the constitution of a bench of arbitrators.

ii) Provision of Neutral Arbitrator

The most careful planning cannot always prevent disputes and this step is the last chance to resolve a dispute before resorting to a binding settlement. Providing for a neutral party to analyze issues and providing dispute resolution, if negotiations come to an impasse, is an important step towards minimizing the problems caused by disputes. This technique involves a pre-selected independent 'neutral' to serve the parties as an observer, fact finder and dispute resolver throughout the construction process. Ideally, a neutral is selected at the inception of the construction phase of the project to act immediately in resolving disputes that cannot be otherwise settled. Although procedures for establishing a neutral vary and can be tailored to meet the specific needs of a project, they involve a few basic elements, including the following[10].

1) The neutral must be acceptable to and compensated by both parties and must be both independent and impartial.
2) The neutral is initially given an introduction to the nature, scope and purpose of the project and is furnished with the contract documents. The neutral is then required to regularly visit the project site, meet with key project personnel, and attend project meetings thus being kept informed of project progress.
3) Whenever the parties are unable to resolve a dispute, it may be immediately referred to the neutral for a prompt non-binding decision.
4) If the neutral is empowered to make only non-binding recommendations and his recommendation is challenged by either party, the recommendations can be admissible as evidence in a subsequent Alternative Dispute Resolution (ADR) proceeding or in a court of law.
5) Because the neutral is readily available and knowledgeable about the project, he can often help to mediate or encourage the prompt resolution of disputes. In addition, the time and cost saved by immediately addressing disputes can help to preserve the relationships among the parties and keep the project focused on mutual goals.

4.2.6 Litigation

Much distinction can be made between the process of litigation and arbitration. No Dispute commented that there is little procedural difference between the two processes. Litigation is often the final resolution step should previous procedures have failed in achieving a desirable outcome. Although, where either party believe that the law will provide the best form of defense, they may choose to expedite informal/non-binding mechanisms and elect to proceed directly to formal court proceedings should the contract allow. Litigation involves the determination of the dispute in a court before a judge and involves a complex process requiring the use of significant resources generally including the use of legal representation. The court of law in which the dispute is heard depends on the size of the dispute in monetary terms. Additionally the jurisdiction and procedures of each court is governed by a strict set of court rules. Settlement through a court of law is obviously the last resort and this usually takes years and can be frustrating. Courts, usually would like the party concerned to exhaust all other administrative channels for seeking redress before hearing the case. Only if the contractor is extremely confident of his case and honestly believes that he has been wronged at the negotiations and at the arbitration levels, must be embark on court action. Court action will require engaging top legal minds who have some experience in construction industry feuds, and the ensuing long legal battle-which will require prolonged attention and physical presence of the contractors top personnel whose services will thus be diverted away from their usual business-can be

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extremely costly and demoralizing. Where the contractor is not a government run enterprise but a private organization answerable on its own strength to its shareholders, the decision to resort to court action should only be made when the gravity of the case is really enormous[8].

4.3. Alternative Dispute Resolution (ADR)

The term ADR has attracted a great deal of attention in legal and quasi-legal fields since the mid-1980s. However, the 1990s appear to have witnessed an enormous growth in the "ADR debate" with an ever increasing sphere of academics, lawyers and consultants entering the arena. Although the concept of dispute resolution techniques which are an alternative to the court system is not new, the more recent advent of the acronym is essentially taken to describe the use of a third party mediator who assists the parties to arrive at a voluntary, consensual, negotiated settlement. Whilst the origins of mediation may be ancient and Eastern, the recent more formalized technique has principally developed in the USA[10].

4.4. Advantages of ADR

1) **Maintains a business relationship**
The proponents of ADR argue that processes such as mediation can maintain existing business relationships as the parties are aided towards a settlement.
2) **Speed**
The average mediation lasts 1-2 days. The proponents of ADR frequently compare this to a trial lasting years. It is, however, important to remember that the parties may not be in a position to forge a settlement early on in the dispute process and it may in fact take many months or even years before they are in a position to mediate effectively.
3) **Lower cost**
Clearly a short mediation is a cheaper event than a trial or arbitration. Some argue that lawyers are unnecessary in the process (and therefore a further cost saving is made) while others consider lawyers a valuable addition.
4) **Confidentiality**
The proceedings of mediation are confidential. Contrastingly, litigation is in the public domain and arbitration may become public if there is an appeal. Confidentiality is an advantage as some clients wish to keep their disputes from the public domain.
5) **Flexibility**
Arbitration and litigation are based upon the rights and obligations of the parties to the dispute. On the other hand a mediated settlement focuses on the parties' interests and needs. The mediator encourages the parties to search for a commercial solution which meets with both parties' needs.
6) **Greater satisfaction**
Many proponents of ADR argue that the ADR process and the outcomes are more satisfying for the parties than a trial or arbitration. Apparently the reaching of a settlement by consensus is viewed as producing high levels of satisfaction for the parties. Research has suggested that high levels of satisfaction are not attained. However, a mediated outcome is still more satisfactory
7) **Advantages of ADR over Legal Proceedings in a Court**
Alternative dispute resolution (ADR) has clear merits over formal legal proceedings in a court of law, and is often preferred over the latter. Though the award has legal sanction and can be imposed, the process is less formal and quasi-judicial in nature, which allows a certain degree of flexibility and ease to the parties. Of course, an arbitrator can always seek expert legal advice on matters of law. The process is ideally suited for technical disputes-for example, the arbitrator can be appropriately selected and a visit to the site made as many be required.

Since the arbitrator works on a lesser number of cases at any given time, the settlement of cases is quicker and less expensive. Also, given the fact that the parties may have their offices at places different from the site of the project, it becomes much more convenient if the time and place of a hearing are fixed based on the mutual convenience of parties. Since the hearings are not open to the public, the overall relationships are less affected. This aspect is important considering the fact that the parties often want to avoid needless publicity as it adversely affects their professional standing and relationships[11].

5. Conclusions

1. Disputes between the parties to construction projects are of great concern to the industry.
2. An effective claim management process is essential to ensure that any contractual claims arising are dealt with in a way that is fair to each involved party.
3. Better training in the area of contract management to the professionals can be said to be of a great help for better understanding of the contract.
4. The requirement of contractor involvement during the design process can improve constructability and reduce the probability of design changes.
5. The evolution of dispute resolution processes has led to the development of a range of alternative dispute resolution opportunities.

References

[1] Emre Cakmak, Pinar Irlayici Cakmak, “An Analysis of Causes of Disputes in the Construction Industry Using Analytical Network Process,” 2nd World Conference on Business Economics and Management, WCBEM 2013, Proceedings of Social and Behavioral Sciences 109 (2014), pp. 183-187.
[2] Zhang Yang, “The Study on Law Disputes in Construction Project Contract Relationship,” International Conference on Medical Physics and Biomedical Engineering Physics, Procedings 33 (2012), pp.1999-2004.
[3] Sigitas Mitkusa, Tomas Mitkusa, “Causes of Conflicts in a Construction Industry: A Communicational Approach Contemporary Issues in Business Management and Education,” Proceedings of Social and Behavioral Sciences 110 (2014), pp. 777-786.

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[4] N. Jaffar, A. H. Abdul Tharim, M. N. Shuib, "Factors of Conflict in Construction Industry: A Literature Review," The 2nd International Building Control Conference 2011, Proceedings of Engineering 20 (2011), pp. 193-202.
[5] Norazian Mohammad Yusuwana, Hamimah Adnanb, "Issues Associated with Extension of Time (EOT) Claim in Malaysian Construction Industry," International Conference on Health and Social Care Information Systems and Technologies, Proceedings of Technology 9 (2013), pp. 740-749.
[6] Manvendra Sinha, Dr. A. S. Wayal, "Dispute Causation in Construction Projects," IOSR Journal of Mechanical and Civil Engineering, (IOSR-JMCE) ISSN: 2278-1684, pp. 54-58.
[7] M. Osama Jannadia, Sadi Assaf, A. A. Bubshait, Allam Naji, "Contractual Methods for Dispute Avoidance and Resolution (DAR)," International Journal of Project Management, 18 (2000), pp. 41-49.
[8] Kongkoon Tochaiwat, Visuth Chovichien, "Contractors Construction Claims and Claim Management Process," A Survey of Thai Contractors, EIT Research and Development Journal 01/2004, pp. 66-73.
[9] Nicholas Gould, "Dispute Resolution in the Construction Industry: An Overview," Construction Law Seminar: Introduction to the Basics, Fenwick Elliott LLP, 9 Sept. 2004.
[10] Ikechukwu Ikea Chinyere, "Procedures and Arrangement for Dispute Resolution Management in International Construction Development Projects," Interdisciplinary Journal of Research in Business Vol.1, Issue 9, September, October 2011, pp. 61-71.
[11] K. C. Iyer, N. B. Chaphalkar, G. A. Joshi, "Understanding Time Delay Disputes in Construction Contracts," International Journal of Project Management 26 (2008), pp. 174-184.

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